

The New Generation of WERSI Organs: Musical Perfection Created by YOU



THE ELECTRONIC ORGAN · „ORGAN“ IZE

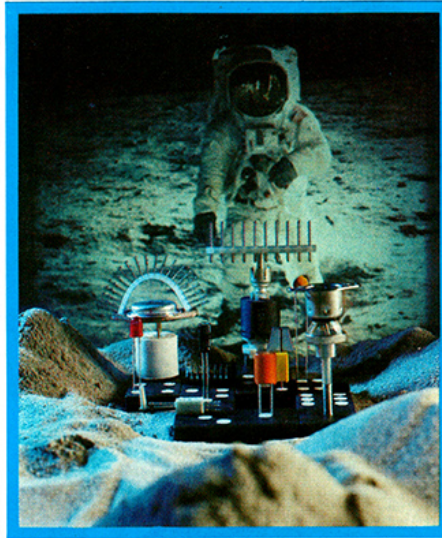


YOUR LEISURE HOURS.

normsorgans.com

Knowing how to use ones leisure hours is the
highest achievement of personal development.
Bertrand Russell

The Search for a Satisfying Hobby



Every working person must take time to relax. This statement deserves more attention these days, as our jobs become more specialized and more monotonous. They often deny us complete satisfaction which is very important for our emotional balance and well being. Recognizing this need for relaxation, you may have engaged in a hobby or two only to abandon them after a short while. They could not provide goals worth achieving causing you to lose interest. The expected feeling of success was not found.

With this catalog we would like to acquaint you with a new and exciting activity.

This activity is educational, introducing you to the latest results of research in modern electronics. It safely guides you towards successful completion without requiring any specialized knowledge or experience.

It rewards you with values you have created yourself and it offers and will continue to offer many hours of excitement and enjoyment.

Build your own electronic organ with the WERSI System!

In this catalog WERSI presents their new generation of electronic organs and accessories to you, the do-it-yourselfer. The electronics involved is very revolutionary, making it very easy to understand. Every non-specialist who can read is able to do it.

Even with a meaningful leisure activity one must keep the cost in mind. This brings up an important argument in favor of the do-it-yourself construction. Building a WERSI organ from a kit, you can save more than half the cost of a similarly equipped ready-made instrument.

That means with WERSI and your own initiative and involvement you can afford a sophisticated electronic organ.

Now, do you have to be a virtuoso or a music lover to benefit from building a WERSI organ? No, this would mean failure to recognize the sense of the hobby.

Even after your project is completed, time after time you will be able to discover new excitement from the world of music.

Of course some piano playing abilities may be helpful for your musical „scouting“. However, they are not a prerequisite. A large assortment of sheet music and instruction books are available for the beginner as well as the accomplished musician. Even if you are a novice your keyboard talents will soon become a pleasant experience for you and your family.

The ultramodern technology in WERSI's new generation of organs offer playing aids and surprising effects which make you and your audience forget that it is only a single person (you) playing the instrument.

Thus, can you imagine that with the new WERSIMATIC rhythm, and using one finger only, you can play walking bass guitar, matching high and low chord arpeggios, and a rhythm group with more than 15 percussion instruments.

Whether you play haunting blues, stomping disco, liturgical hymns or classical renditions the new generation of WERSI's organs will make your life more enjoyable.

Studying the new catalog you will realize that WERSI has set the standards for the organ industry of tomorrow. WERSI uses, in its product family, concepts based on the most advanced techniques. The main advantages resulting are: easy-to-follow construction, accurate voicing for the demanding musician, and untold playing combinations.



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Audio Mixer 2004

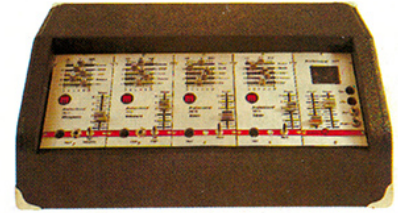
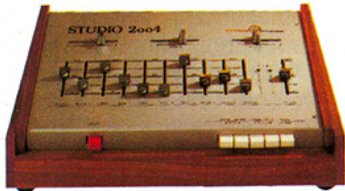
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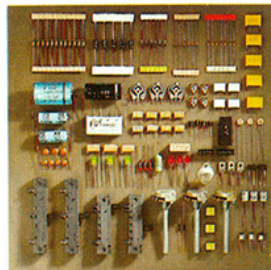
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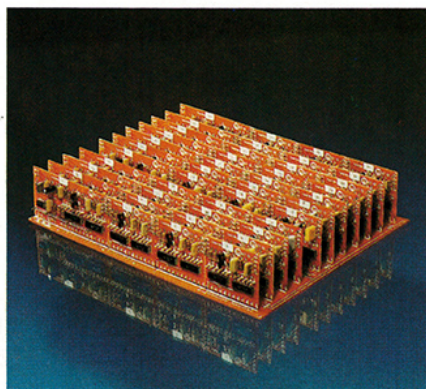
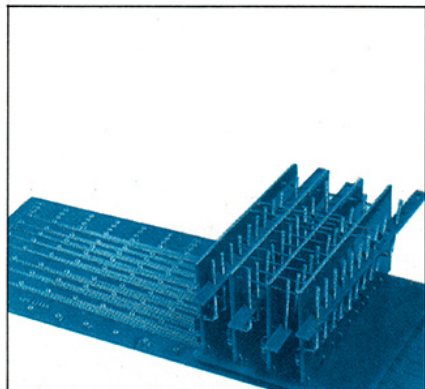
Records

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This is WERSI's Mark of Excellence

Lorelei's Modern Sound



In 1969 a team of young electronics engineers and music lovers founded the company WERSI electronics in the small town of Halsenbach near the Lorelei Rock on the Rhine River in West Germany. Their enthusiasm was tremendous but the future uncertain.

The research for space exploration provided an unprecedented boost to the field of electronics. Noticing this, the determined group saw their chance.

Their goal was to provide electronic organs to everybody by means of do-it-yourself kits with easy-to-follow assembly manuals.

The concept of the enterprise was ambitious. The people involved wanted to make a high quality line of products. The kits had to be of the technically most advanced and refined variety that could be found on the international market.

This attitude ensured top quality without compromises for the sake of fast commercial success. WERSI recognized at the start the consequences such a philosophy would mandate, namely the need for continuous research and refinement. The old must be abandoned if the new promises improved results.

With these high standards in mind WERSI was able to put the new generation of organs into reality as presented in this catalog. Some of the prerequisites leading to this event were years of fundamental research, the application of revolutionary technologies, and the in-house development of new integrated circuits.

How valid this concept of flexibility is shows in the tremendous success of WERSI electronics. The customers appreciate the high quality and reliability of the products as well as the above average customer service. In Europe today, WERSI electronics is one of the most important companies in electronic musical instruments.

The originally small team has grown to a staff of more than 150 employees. The production facilities are continuously being expanded. The exchange of information to keep the technological know-how at its highest levels is maintained with electronic experts and other industrial companies all over the world.

WERSI has subsidiaries in six West German metropolitan areas. Independent WERSI companies are located in Belgium, Holland, Austria, Switzerland, and United States.

WERSI organs are sold in over 25 countries.

WERSI's technological leadership has a purpose. Every new development and every patent serve to make the do-it-yourself construction easier and make the WERSI electronic organs more versatile.

The reputation WERSI enjoys in professional musical circles is confirmed by world renowned artists who work with WERSI instruments such as: Joe Dixie, Klaus Doldinger, Kurt Edelhagen, Karel Gott, Udo Jürgens, Franz Lambert, Berry Lipman, Jürgen Marcus, Günther Noris, Fritz Pauer, Klaus Wunderlich and not to mention the many TV and recording studios where WERSI instruments are held in high esteem.

WERSI Kits Carry the Mark of Technical and Musical Excellence

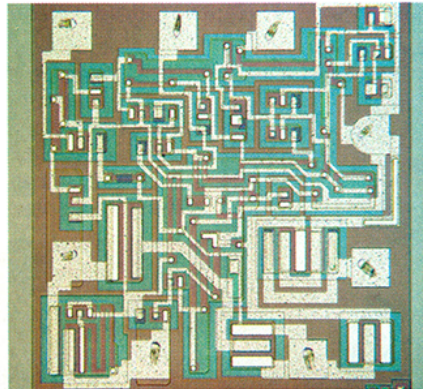


WERSI is the first kit producing company applying the latest achievements of the space age technology. This has decisive effects on the technical and musical quality of WERSI's electronic organs for the do-it-yourselfer.

The application of modern integrated circuits, so-called IC's, simplifies the organ construction considerably. A single IC may replace up to 10,000 conventional electronic components. In addition, IC's save a lot of space and they are extremely reliable devices.

WERSI, however, went a step farther yet. IC's which were not available on the open market were developed for specific purposes by WERSI engineering. They are being produced by the most highly reputed IC manufacturers in the world. The result: economical electronic organs with the most up-to-date techniques and unsurpassed musical capabilities.

Electronics by WERSI drastically reduce possible sources for assembly errors. This alone saves you considerable time when checking and double checking as your work progresses.



The extensive electronic capabilities of WERSI's organs offer to you playing features and sound qualities which are rarely found even in ready-made commercial instruments.

The electronics engineers at WERSI have set new standards for electronic kit production.

Over the years WERSI offered to its kit builders many novelties and firsts which include: totally integrated tone generator, IC plug-in rhythm, printed circuit keyboard matrix, laced wiring harnesses, sine-wave drawbar systems, electronic delay line vibrato, and hinged key- and stopboards.

As you will notice on the following pages WERSI again presents a number of introductions to the world of organs.

It is therefore no surprise that so many patents evolved from the development of the WERSI organs.

Hard work resulted in the success which made WERSI one of the leaders of the European electronic organ kit manufacturers.

Modern labs, a staff of highly qualified electronics engineers, information exchange with experts from all over the world, keeping abreast of the latest developments, and the determination to provide only the best quality formed the foundation for WERSI's popularity.

Last but not least, the contributions of such musical artists as Klaus Wunderlich, Berry Lipman, Franz Lambert, Kurt Edelhagen, Kurt Bong, and many others too numerous to mention proved to be invaluable in the early stages of conceptual design.

And, of course, you benefit from these personal associations. WERSI organs pack many musical values. They convince with their true sounds. Human engineered layout of the controls simplifies playing.

1: At the beginning of all things there is the research. Here new musical ideas are converted into reality, specifically tailored for the kit builder.



WERSI became the mark of excellence in the manufacture of electronic organ kits. Highly qualified development engineers already work for the kits of tomorrow. Seamless quality control from production through shipping ensures the high quality which leads to your and our success.

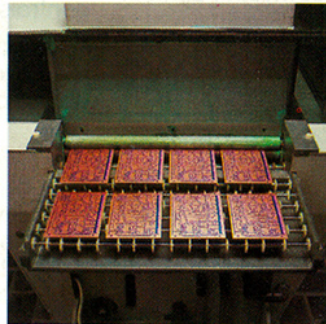


2: The layout of a printed circuit board starts with the taping of the conductor patterns.



3: The conductor pattern is transferred to the raw copper-clad board material in WERSI's own screen printing facility.

4: 5: 6: Here the screen printed boards pass through the fully automated etcher.

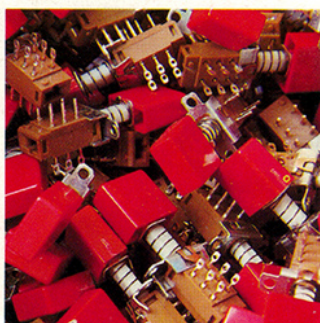


7: The hole patterns for component insertion are drilled on high speed drill presses.



8: WERSI's wiring harnesses ensure the trouble free organ wiring.

9: These and many other parts are used to make up the individual kits.



12: Hand-selected hardwood veneers are used for all WERSI products.



10: Each component, along with a descriptive packing label, is sealed in a plastic bag.



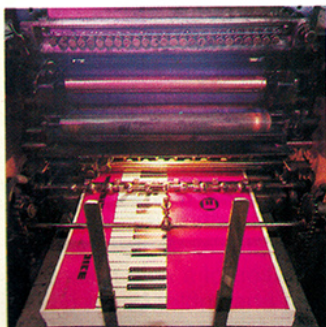
11: Here the components and kits are checked and packed.



13: The high quality of the organ consoles and speaker cabinets is controlled in WERSI's own cabinet making facility.



14: Each kit pak contains the respective assembly manuals.



15: The assembly manuals are printed, assembled, and cut in-house.



16: All WERSI products are also available fully assembled. Here the components are put into the circuit boards.



17: This is a view of the final assembly department for ready-made products.



18: All products are displayed and demonstrated by trained personnel in our showrooms.



19: WERSI kits are shipped by parcel services or freight carriers.



THE NEW WERSI ORGAN GENERATION

Tomorrow's Electronic Organ Kit is Here



None of the important advances of mankind have ever been achieved while dwelling on the past and its traditions. When exploring new ways one must question the existing knowledge and push beyond it.

This principle which is the driving force of all human research is particularly critical for those fields dealing with modern electronics since here the state-of-the-art changes very rapidly.

Progress means: making ever more complex devices easier to use. The first computer was built in the USA in 1945, weighed 30 tons and relied on 20,000 vacuum tubes. Today, we all simply slip a personal „computer“ in our pocket.

Disregarding the fact that the WERSI program had been extraordinarily successful, three years ago, WERSI engineers laid the cornerstone for a new era of organ kit technology.

Like WERSI, many companies have expanded their programs in electronic organs and have added new features over the years.

But now WERSI created a new line of products which no longer adhered to the traditional approach. All equipment was redesigned from the ground up.

New technologies were applied. They include the use of building blocks from microcomputers and the in-house development of IC's.

The development of the new product generation has led to the application of many patents.

The truly astonishing fact is that the do-it-yourself construction has become simpler despite all the new internal complexity. New and better sound capabilities were created for the entertainment sector as well as for the classical instruments.

Every model of the entire organ line, from the smallest spinet to the largest console, include the advantages of redesign.

Forget Point-to-Point Wiring WERSI Supplies Ready-Made Wiring Harnesses

With point-to-point wiring half of your assembly time would be spent running wires. WERSI supplies, as part of the kit, ready-made and laced wiring harnesses.

This, along with saving time, eliminates errors which so easily happen with individual wiring. WERSI organs can be built by anyone.



Electronic Keying: Controlled Attack and Sustain

The new electronic keying of WERSI's organs provide an extremely reliable key action, since a key merely switches a DC voltage command and not multiple audio signals. Kit assembly time is considerably reduced through the use of proprietary IC's.

The musical possibilities are greatly enhanced: Variable sustain at all pitches, soft attack for fixed stops, and direct attack for drawbars.

The Exclusive Program Memory: Complex Registration at Finger's Touch

All new WERSI organs include a registration memory bank. 10 or more programming plug-in boards contain any combination of organ stop settings. At the touch of a single button you can, for example, change from a registration of a solo trumpet to a full string ensemble, from a piano to a rich drawbar setting or from an accordion to a complex liturgical registration.

The new WERSI program memory opens possibilities which cannot be fully appreciated yet for the occasional player as well as for the professional musician. A single touch of a button replaces the changing of a dozen or more stops and makes available sound settings which you would normally have to compose tab by tab.

With this addressable registration memory WERSI has set a significant milestone.

Are You Afraid of a Kit?

Even the Smallest WERSI Spinet has Drawbar Sound, Many Brilliant Fixed Stops, String Choir and Numerous Special Effects

By means of the fundamental redesign WERSI was able to pack more features into the new generation of organs than was believed to be possible.

The application of the foremost technologies has created a small miracle: WERSI was able to maintain prices.

The program was extended to include an additional spinet and a new church console.

WERSI is of the opinion, having made available this kit program to the music lover, that their new organs rank among the world's most advanced instruments.

WERSI's Kits Are Designed for the Inexperienced Kit Builder

The reading of this catalog may already have enticed you to get your feet wet by building an electronic organ.

You may already have imagined how enjoyable and fulfilling such a leisure activity could be for you and your family. You may remember a favorite tune you always wanted to play. You may already have reserved a location in your home where your WERSI organ with its tasteful styling would represent a decorative addition.

But now you have your doubts whether you can tackle the task of building an organ. Let WERSI tell you: You'll do it! The do-it-yourself organ construction no longer is an exclusive past time of a few technically versed kit buffs.

The new line of WERSI organs has eliminated many problems which are still found in some other kit systems.

Ready-made wiring harnesses and modern integrated electronics form a safe base for trouble-free construction without the need for technical or electronic knowledge.

The WERSI organ you are going to build yourself will sound just as beautifully as the one you may have heard in one of our showrooms.



*Words from Our Customers and from the Press**

„I have built an organ W 358 SKT for a friend of mine and I am in the process of building another like it. Later on a model W 248 S and possibly a W 258 S will follow. I did not encounter major problems. Smaller difficulties could in most cases be eliminated by rereading the appropriate section of the assembly manual.“

R. G.

„The assembly of the Piano is easily accomplished because the assembly manuals are easy to follow and the components are of high quality (I commend you especially on the first class printed circuit boards!)“

G. K.

„I am glad that I made the right choice with a WERSI organ. What is written in the promotional literature corresponds to the truth word by word. I can confirm this from my own experience and with satisfaction. Wherever I find the opportunity I shall recommend you and your company with my conviction.“

F. B.

DAS MUSIKINSTRUMENT, 4/76: „WERSI has spent great efforts to design the construction simply, easy-to-follow and trouble-free all of which they managed to accomplish successfully.“

PODIUM, 5/76: „Often one hears the apprehension that the electronic organ kit building be a risky matter, that one possibly could not manage its assembly and that one stands to loose a lot of money. This is not the case at all with WERSI organs since the WERSI system can be called optimally and safely designed, facts which we can confirm after a careful investigation.“

DAS MUSIKINSTRUMENT, 4/76: „Determining is further that WERSI supplies ready-made laced wiring harnesses, finished cabinets and keyboards, plug-in systems, printed circuits, etc. Complex and time consuming jobs are performed at the factory.“

** All quotes translated from German to English.*

The WERSI Do-it-Yourself System

Pre-Engineered, Pre-Fabricated, Pre-Organized

The Electronic Organ – by Kit and Kit Paks

The smallest unit of the WERSI kit system is the individual component. The component may be a transistor, a diode, an IC, a resistor, a capacitor, etc. WERSI packs each component in its appropriate bag together with a packing label showing a detailed description of the bag's contents. You need not to be familiar with these components.

It takes many of these components to make up a kit. The kit, of course, also contains the printed circuit board and separately packed items.

A Kit Pak, in turn, consists of a number of kits. This Kit Pak is compiled in such a way as to correspond to a certain phase of your construction project. You require 4 or 5 Kit Paks to assemble a basic organ, depending on the model. The number of additional optional Kit Paks and their sequence of assembly is entirely up to you. For a fully loaded deluxe organ with all accessories you will need 13 Kit Paks.

The WERSI system is designed such that the addition of an option is possible at any time.

The WERSI Kit Pak: Building Block Assembly According to Your Schedule

You can build a WERSI organ in a record time of a few weeks or leisurely over the spread of a year.

The Comprehensive Order Form makes the kit buying easy. It lists all the Kit Paks you have selected for a particular organ model. You call for those paks that fit your time schedule and finances. You pay as you go.



You may find that instead of picking your paks at random a WERSI pre-selected option level may fit your particular needs. The option level program is designed to save you money since it costs less than the sum total of the individual paks.

First, Familiarize Yourself with the Complete WERSI Program

This catalog conveys to you rather complete information concerning the WERSI do-it-yourself program. Please complement your knowledge by an acoustic additive. Order one of our demo LP's or cassettes. (See page 95)

The best way to see and hear the WERSI products is to visit one of our factory showrooms or studios (see pages 96 through 99 for addresses). There you will find every model on display, you will meet capable and interested personnel, you will be able to study the instruments, try them out, meet other kit builders to compare progress and last but not least find out what makes these things tick.

Furthermore, check our newsletter WERSI ORGANEWS to see whether any special events are taking place at our studios or are coming your way.

What to Know When Ordering

You can order WERSI components, WERSI kits and WERSI Kit Paks by phone or mail. Or better yet come and see us at one of our studios. We would like to maintain personal contact with you and, besides, you may want to take some paks along rightaway.

The Organisation of WERSI Kits

To avoid swamping you with large numbers of components, parts and pieces the individual kits are kept as small as feasible. As your organ project progresses the master assembly manual will call out these kits as required. Kits not yet needed will remain packaged, causing no unnecessary confusion.

All components within a kit are sealed in plastic bags, together with individual packing labels. The label carries the kit name, the kit number, the component description with quantity and the bag number. They remain sealed until the assembly manual calls them out to be used.

WERSI prepared assembly manuals for each kit. They contain a technical description for the interested reader, a step-by-step assembly section with easy-to-follow instructions complemented by diagrams, sketches, photos and noteworthy tips.

WERSI utilizes but first quality components from industry's leaders and manufactures some special parts in-house.

The ordered components, kits and Kit Paks are shipped to you by parcel services and freight carriers. Naturally, you can also pick them up in person at the factory showroom.

How to Go About Building Your WERSI Organ

Now You Can Start Building Your Organ

The foundation and starting point for the assembly of your WERSI organ is the printed circuit board. This special board carries on one side the conductor pattern representing the „wiring“ between components. On the opposite side is screen printing indicating which component is to be inserted and soldered where.

Soldering, by the way, is the only technique you must possess or acquire. But even if you have never soldered in your life it is easy to learn. After a few trials you will know how to handle the soldering iron and the solder. The manual „General Instructions“ provides very clear guidance.

In addition to the soldering iron you will need tools which very likely already exist in your tool box: screwdrivers, pliers, wire cutters and the like.

The assembly manual will instruct you to take a component from a bag, to insert it at the appropriate location on the circuit board and solder its leads to the copper pattern. As a guidance, a properly executed solder joint requires a mere two seconds.

WERSI has taken all the complicated and cumbersome work into their own hands by the application of a high degree of integration.

For example you would have to assemble and adjust between several hundred to more than 2,000 contacts if you were to build an organ with mechanical keying.

But a WERSI organ only has a single contact per key and the switching takes place in the integrated circuits.



After you are done assembling a circuit board you are going to check its functions. For this purpose you need a small and inexpensive multi-meter. All other tests are designed by WERSI such that anyone can conduct them with simple means like, for example, the tape input of a radio.

And Should You Ever Get Stuck: We Are Here!

In the past, over 10,000 customers have assembled WERSI kits successfully. We cannot think of better proof for a well engineered and easy-to-use system.

Despite your careful efforts, should you find you have made an error the assembly manual is useful with its hints to assist you.

If your attempts at solving your problem prove futile call upon the expertise of WERSI's personnel either by dropping us a note with your findings or phoning us for guidance. We shall be glad to help you.

You may also opt to send the suspect printed circuit board to us for evaluation and repair. We shall give it prompt attention and perform the work for a nominal charge.

The Organ Works

During the construction of your organ you have grown intimately familiar with the instrument unlike anyone who purchased a ready-made model.

From this you will derive additional benefit once you start to play. Even as a beginner you can have a lot of fun with your WERSI organ! The electronics of your new WERSI instrument creates for you – and with you – true musical wonders.

Take the new WERSIMATIC rhythm with its automatic accompaniment. You must hear it to believe it! It brings you lively walking bass guitar and an astonishing harmonic accompaniment with a variety of voices and arpeggiated chords. It knows 24 rhythm patterns from Waltz over Bossa Nova to swinging Disco. And all this at the touch of a finger.

When you play classical or orchestral music the WERSIMATIC rhythm accentuates the melody with finely tuned harmonies making you sound like a true virtuoso.

With your electronic organ from WERSI you will enjoy your leisure time; satisfying hours during construction are complemented by many rewarding musical accomplishments in the years to come.

All WERSI instruments are also available ready-made.

Other instruments, besides electronic organs, in the WERSI program include rhythm units, electronic pianos, string orchestras, PA systems, audio mixers, speaker cabinets and of course, the WERSIVOICE. For information on these and other accessories refer to the rear of the catalog.

The WERSI Organ

Kurt Edelhagen appreciates the addition of a WERSI Organ to his orchestra.



You Can Tailor Your WERSI Organ to Your Own Needs

When building an organ of the WERSI do-it-yourself system you must initially make only two decisions. They concern the fundamental concept and the musical purpose. This determines the cabinet type and size and includes the number of manuals and the number of keys per manual. In every other respect you are free to equip the organ – now or later – with additional options and special accessories.

If your preference lies in the area of entertainment music and if you only play easy classical or liturgical music we recommend a WERSI organ with 2 x 49 keys (2 x 4 octaves). If you are going to interpret classical masterpieces or liturgical music you should choose a WERSI model with 2 or 3 x 61 keys (5 octaves). It should be obvious that the larger models are also suited for theatre type music.

How Does Your WERSI Organ Work?

The newly developed tone generator (Kit Pak 1) produces all required electronic waveforms. These raw signals are keyed by electronic switches (Kit Pak 2). The tone generator „delivers” tones only when a key (Kit Pak 3) is depressed. This „silent” generator results in very clean tones when the organ is played and virtual absence of sound when it is not being played.

The keyed tones are fed to the formant filters of the fixed stops (Kit Pak 7), to the drawbars (Kit Pak 3) or to one or several of the optional building blocks (Kit Paks 10, 11 or 12). The treated signals are volume controlled by the swell shoe and finally pass via the power amplifier (Kit Pak 6) to the speaker.

Now you hear the unique WERSI sound.

The Waveforms Determine How an Electronic Organ Sounds

Organs vary greatly from manufacturer to manufacturer. This we invite you to find out by comparing a WERSI organ with other brands. The difference you will notice is a result of two areas, the first being the derivation of the fundamental wave forms, and the second being how these wave forms are treated to perfect the individual voices.

The harmonic content of the sine wave, square wave and saw tooth wave make these three the most valuable as fundamental waves.

An electronic organ which is to have a wide variety of voices and special effects requires all three fundamental wave forms simultaneously.

WERSI's recognition of the important role the tone generator plays as the heart of your organ proudly introduces its new MOS-LSI Precision Master Generator.

WERSI Organs Have Two Independent Voicing Systems

Each manual has two independent voicing systems, each of which can be used individually or in combination. The one system, the drawbars, utilizes sine waves for additive voicing (waveform synthesis). The other system, fixed stops, derives its voices by subtractive filtering of square and saw tooth waveforms (formant method).

The sine wave drawbar system produces that particular sound which made the electronic organ famous. You select the combination of drawbar settings to compose the voicing you desire.

With the help of the drawbar synthesis you can also create the typical sound coloring of a clarinet, trumpet, horn and even a xylophone.

Unlike the drawbar system the fixed stop filters simulate the orchestral instruments with their frequency dependent color (formants) giving a truer reproduction of desired voices. Formant filtering is especially well suited for bright solo voices like oboe, clarinet, trumpet, trombone, flute, cello and violin.

Fixed stops are indispensable for the liturgical and classical realm of music. The great works of organ music of the past centuries contain only registration prescriptions for fixed stops.

The New WERSIDATA Registration Memory

An organ with many musical features has many stop tabs. This makes the registration rather complex. One occasionally gets into a time squeeze when changing registrations that require large numbers of stops. The player, therefore, has to forego certain settings.

All organs of WERSI's new generation are fully programmable. This is a WERSI exclusive!

By means of a small plug-in board you determine which stop setting is to be stored in memory. At the touch of a button you can, for example, turn off 35 stops and turn on 3 others or „mute” 60 stops and activate 48.

The WERSIDATA memory makes it possible to change between extreme stop settings instantaneously.

The professional musician will surely appreciate this feature. The home organist will enjoy it too.

Pedals and Pedalsustain – Sound Enrichment Through Bass Instruments

You can equip your WERSI organ with or without pedals. We recommend pedals for a broader well-rounded sound character. 13 pedals suffice for general entertainment music. It is played monophonically having low-note-select. The 25 or 30 pedal polyphonic clavier is preferred for classical and liturgical music.

WERSI organs have up to 8 pedal footages. Available voices include drawbars, bass guitar, tuba, trumpet, trombone and string bass. Even bell combinations are possible.

Challenge Your Imagination with Accessories and Special Effects from WERSI

An electronic organ without special effects is like a racing car which is used for commuting. Special effects are mandatory for dressing up entertainment music and provide the haunting drive to jazz.

You can, by combining certain special effects, simulate the sound of a xylophone, a pizzicato violin, a vibraharp, a „laughing” trumpet, a Hawaiian guitar, bag pipes and more unusual instruments.

The WERSI Piano sets new standards. Besides the astonishing piano you can produce the Harpsichord and a true-to-life player piano, sometimes called Honky-Tonk. Voices like Celeste and Kinura are available too.

The Glissando-Arpeggio represents a remarkable feature, tied into the piano. You hold a chord on the lower manual and the arpeggiator repeats it up or down the entire manual.

The New WERSIMATIC Rhythm: Must Be Heard to Be Believed

Even earlier models of WERSIMATIC rhythm were built with highstanding techniques.

Incorporated in the new generation of WERSI organs there is a new WERSIMATIC. It is believed that this is the most sophisticated rhythm machine on the market today.

We do not know of any other unit that has so many rhythms and instruments, such true-to-life sound and such an advanced accompaniment all concentrated in one instrument.

It encompasses 15 instruments: bass drum, low and high tom-toms, low and high bongos, woodblock, snare, maracas, tambourin, two cymbals, washboard, cow bell and two high hats.

The new WERSIMATIC rhythm masters 24 rhythm patterns: march, tango, waltz, bossa nova, rhumba, samba, rock'n roll, disco and more.

The WERSIMATIC can be controlled by a hand-or footswitch or can be triggered from a keyboard or pedal. The tempo is widely variable or can be pre-set.

The new WERSIMATIC is equipped with an advanced auto accompaniment. It complements the carrying melody with matching harmonies, with or without rhythm group: If you do not like to play the pedal and/or the lower manual the phantom accompaniment takes over the task.

You can determine, by depressing a single key, the desired chord (the electronics stores this information). WERSIMATIC delivers the correct accompanying chord automatically. There is a selection of voices for these chords.

In addition, the WERSIMATIC produces a true walking bass with several varied patterns. This is a definite improvement over an alternating bass.

WERSIMATIC represents extraordinary playing assistance to the layman – as well as the professional musician. It can reproduce any desired chord automatically.

WERSIVOICE: Rotor Sound – String Choir

WERSIVOICE adds the most sophisticated vibrato to your organ. It has quickly received wide recognition in professional circles over and beyond the legendary WERSITRONIC phase vibrato.

WERSIVOICE, in the Whirl mode, creates the typical and well-known rotating baffle sound giving your organ the splendid fullness which is so ear-pleasingly familiar.

WERSIVOICE runs at fast or chorale speeds. But more yet – the intensity of the effect can be varied to suit with no mechanical rattles or squeaks.

Recording is finally simplified by the absence of formerly needed microphones.

Let's change the WERSIVOICE to the Choir mode. It no longer is a rotating baffle simulator; rather it is now an electronic „multiplier". That means an incoming solo voice appears at the output as being „multiplied", as an ensemble or choir of voices.

Together with the organ's electronic keying and its controlled envelope, you are able to create complete orchestral string sounds or the simulation of a brass section.

No organ is complete without the WERSIVOICE!

With this catalog we try to bring you closer to WERSI's wonderful world of music.

If we succeeded in arousing your interest in a WERSI project we are pleased.

Going with WERSI you are following in the foot steps of many musical experts who know this product line ranks among the world's best.

International Stars

with WERSI Instruments
— favorites of Show-business



Norbert Schultze –
„Lili Marleen”,
one of his best known
compositions.



Klaus Doldinger –
a top man on the
European jazz scene.



Berry Lipman –

composer, arranger
and orchestra leader,
a „music maker” par excellence.



Curt Prina – organist
with Hazy Osterwald,
the international
show band.



Gunter Noris –
and his big band,
a pleasure to listen to.

Klaus Wunderlich –
a star of the keyboard,
also called
„the best one-man-band”



Franz Lambert –
makes an organ come alive,
seeing him performing
is a special treat.



Paul Kuhn –
world renowned artist
and leader of the SFB Big Band.

Udo Jurgens –
his songs capture
all young, from 7 to 70.

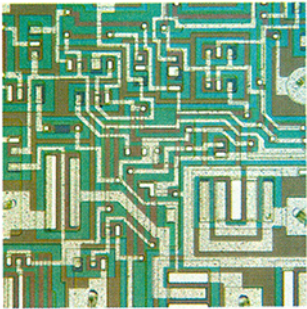


Jurgen Marcus –
pop singer, interpreting
many of the top hits.



Kurt Edelhagen –
and his orchestra,
a master of the trade.

33 Points That Prove How New WERSI's New Generation of Organs Is

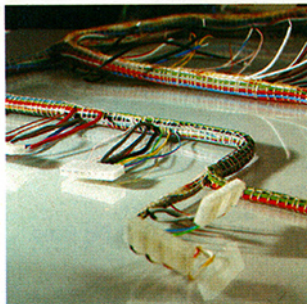


The inside of an IC

1. WERSI's new generation of organs was completely redesigned. It utilizes the most up-to-date technology for all functions.

2. The audio signal paths are controlled by reliable solid state switching.

3. High signal-to-noise ratio. The organs are quiet enough for studio use.

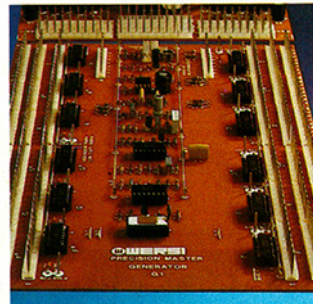


Detailed view of the main wiring harness

4. Simplest possible construction due to ready-made wiring harnesses and pre-fabricated mechanical assemblies.

5. The power supply is IC-stabilized and short circuit and temperature protected.

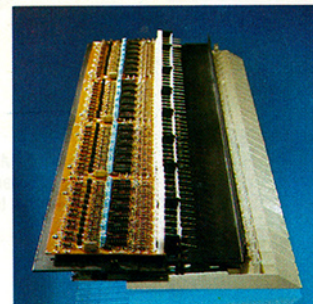
6. Precision Master Generator in MOS-LSI technology.



MOS-LSI Precision Master Generator

7. Integrated electronic keying in PL technology.

8. Integrated envelope control with soft attack and variable sustain.



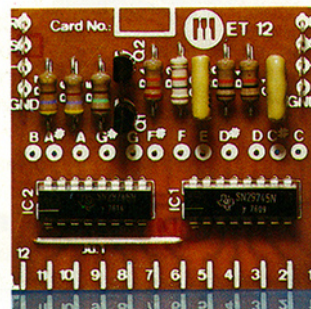
Envelope control with key contact

9. Electronically gated formant filter for fixed stops.

10. Newly designed building blocks using MOS technology throughout.

11. LDR swell shoe loudness control.

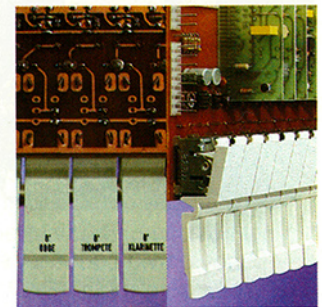
12. Low impedance audio distribution using operational amplifiers for brilliant frequency spectrum.



Electronic keying with IC's

13. New contact system requires only one contact per key. IC's perform the rest of the work.

14. New stop switches with self-cleaning contacts, installed directly on the circuit boards.



Formant filters with tab switch

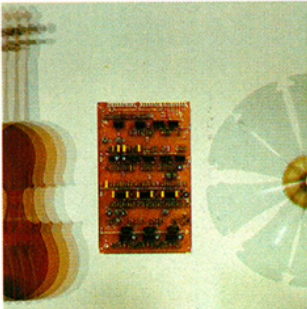
15. All switch functions are programmable, for example, by the WERSIDATA.



a) WERSIDATA programming



16. Built-in string choir through WERSIVOICE.



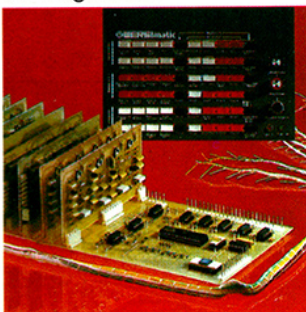
WERSIVOICE

17. Pre-set stops for percussion.

18. All sound sources can be routed through the special effects channel. Special effects range from percussion over tremolo to wah-wah.

19. Both legato and solo percussion modes available.

20. New WERSIMATIC rhythm has 24 patterns, 15 instruments and a new automatic accompaniment for chords, one-finger control and walking bass.



WERSIMATIC rhythm and accompaniment

21. Pedal voicing with 6 footages and sustain for drawbars, trumpet, tuba, string-bass and bass guitar.

22. Powerchassis, mono or stereo, with interface for external sound cabinets, speakers and recorders.



Power chassis mono/stereo

23. Transposer with a range of one octave.

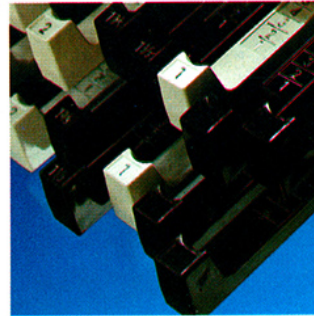
24. New small spinet with all WERSI features for grown up sound.



The opened ORION

25. New church model, designed especially for liturgical and classical music with stops up to 1/4', built-in piano, string orchestra, envelope control and fixed combinations.

26. Audio signal cabling drastically reduced by remote controlled IC gates.



27. Drawbar sound in every WERSI organ. All sound sources can be assigned to either left or right channels.

28. The „silent“ precision master generator, together with the electronic keying eliminates annoying „sing-through“.

29. Timeless styling and hand-selected veneers.

30. Surprisingly realistic rotating baffle sound through WERSIVOICE.



The CLASSICA

31. The main cable harness is designed to accept all options.

32. All subassemblies are simply plugged in.



33. WERSI's international patents. WERSI's new generation of organs is fully matured and thoroughly tested. Its development has resulted in many patent applications.

WERSI Organ ORION W1T

The „smallest” of WERSI’s new organs will surprise you by its versatility and sound.



The „ORION” W1T offers all the advantages of WERSI’s new generation of organs: many fixed stops, drawbar sound, piano, string orchestra and electronic registration memory.

The cabinet is designed for portability. It can be completely enclosed in its vinyl-clad case. Steel legs are standard equipment.

The „ORION” W1T is the ideal organ for the young at heart.

Gunter Noris is happy with the WERSI instruments he is using in his big band.



Gunter Noris:
„... here she is,
my WERSI”.

The ORION W 1 T was designed for the many musicians who travel quite a bit. It can be packed up quickly and it easily fits into the trunk of your car. This organ concentrates many features in a small vinyl-clad shell.

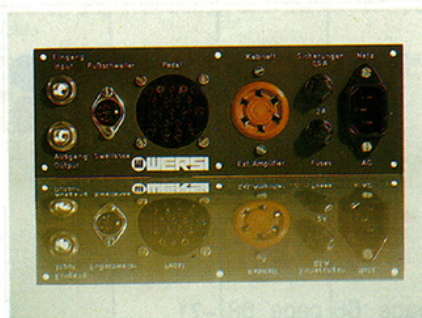
A musician and his ORION W 1 T.



And here the ORION W 1 T is ready to go.



All portable WERSI organs are equipped with a standard interface panel for pedals, swell shoe and external amplifiers.



Organ Interface Panel
with every WERSI Organ.

Did you know that WERSI offers an extensive program of amplifiers, speakers and tone cabinets for stage use? (see pages 78 through 89)

WERSI Organ ORION W1T

At this point may we recommend to you three sensible option levels. Each offers its own price advantages.



Kit Pak

Order No.

	page 48	page 50	page 52	page 54	page 56		
Option Level 1 The organ is equipped with a drawbar system and a number of special effects. It already can be played via an outboard amplifier or stereo.	1	2	3	4	5		050
Option Level 2 This extension contains the fixed stops and the fully equipped pedals. In addition you receive the WERSI-VOICE for rotating sound and string choir and the full set of special effects.	●	●	●	●	●		051
	page 58	page 59	page 60	page 61	page 62	page 64	
Option Level 3 The third level adds the PIANO, the WERSIDATA registration memory and the WERSIMATIC rhythm and auto accompaniment. With this your organ is equipped with all options.	●	● ●	● ●	●	● ●	●	052
	page 65	page 66	page 68	-71			

Each Kit Pak is available individually. The corresponding order numbers can be found in the price list.

The WERSI organ system makes it easy to customize your own organ. You plan the order with individual Kit Paks or according to option levels. The musical and technical descriptions of each Kit Pak are found on pages 48 through 71 of this catalog.

The WERSI Organ **ORION** W1T offers



Kit Pak 1	Tone Generation	Precision Master Generator, 8 octaves plus pitch shift (slomatic) over additional octave. MOS-LSI technology. Sine wave, square wave, sawtooth and pulsed wave forms available simultaneously.
Kit Pak 1	Generator Functions	Continuous vibrato, delayed vibrato, slalom, slomatic, transposer, master pitch control, Hawaii-effect.
Kit Pak 3	Upper Manual	49 keys, C to C (4 octaves)
Kit Pak 2	Number of keys	16', 8', 5-1/3', 4', 2-2/3', 2', 1'
Kit Pak 2	Drawbars	
Kit Pak 7	15 Fixed Stops	Cello 16', Horn 16', Trombone 16', Saxophone 16', Flute 8', Viola 8', Clarinet 8', Oboe 8', Trumpet 8', Flute 4', Violin 4', Nasat 2-2/3', Piccolo 2', Flute 1', Mixture 3-fold
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
Kit Pak 3	Lower Manual	49 keys, C to C ⁶ (4 octaves)
Kit Pak 2	Number of keys	8', 4', 2-2/3', 2'
Kit Pak 2	Drawbars	
Kit Pak 7	8 Fixed Stops	Viola 8', Principal 8', Horn 8', Violin 4', Principal 4', Nasat 2-2/3', Principal 2', Salicional 2'.
Kit Pak 3	Functions for all footages	Polyphonic fast attack standard, soft attack and sustain optional.
Kit Pak 8	Pedal	13 pedals (steel), free-standing vinyl-clad housing.
Kit Pak 8	Drawbars	16', 8'
Kit Pak 8	4 Fixed Stops	Tuba, Trumpet, Stringbass, Bass Guitar.
Kit Pak 8	Functions	Short/long sustain, 3 independent envelopes.
Kit Pak 3	Sustain	Upper manual all footages, optional for lower manual.
Kit Pak 11	Special Effects	Solo/legato percussion, repeat, contracussion, tremolo, second voice, hand wah-wah, triggered autowah, free run autowah.
Kit Pak 11	Pre-Sets	Fixed stops, drawbars, 2nd harmonic, 3rd harmonic.
Kit Pak 12	Piano Voices	Piano, Celeste, Kinura, Honkytonk, Harpsichord, Banjo with the functions tremolo, echo and damper. Variable echo and tremolo speeds.
Kit Pak 1+10	Vibratos	Continuous frequency vibrato, delayed vibrato. WERSIVOICE rotating baffle effect with 2 speeds and 3 intensities. Drawbars, fixed stops, special effects, piano and pedal can be assigned separately to the WERSIVOICE.
Kit Pak 5	Reverb	Large spring unit with 3 programmable reverb degrees.
Kit Pak 14	WERSIMATIC Rhythm	24 rhythm patterns, 15 instruments, touch control and automatic, snare roll, drum break, pre-set and variable tempo, alternating rhythms.
Kit Pak 14	WERSIMATIC Accompaniment	Phantom accompaniment with or without memory for walking bass, low chords and arpeggiated high chords.
Kit Pak 10	String Orchestra	Built-in string orchestra using WERSIVOICE and string voices of both manuals and pedals.
Kit Pak 5	Preamplifiers	Preamplifier with active treble and bass controls. Swell shoe with compensated loudness control
Kit Pak 7	Loudspeakers	External amplifier/speaker system required.
Kit Pak 13	WERSIDATA Programming	10 programs on plug-in boards for both manuals and pedals. Programs have random access and are changeable.
Kit Pak 5	Interface	Connectors for tape record/playback, headphones, external tone cabinets and amplifiers.
Kit Pak 4	Finish	Vinyl-clad cabinet with locking top and steel legs.
	Dimensions	Organ Top without legs height: 11 3/4", width: 42 1/2", depth: 25 1/2"

You can
Organ
WERSI
WERSI

WERSI Organ ORION W1S

With this model we present to you the ideal home spinet. The „Orion” W 1 S requires little space, but behind its modest dimensions an extremely versatile organ is found.



The „Orion” W 1 S offers all the advantages of WERSI's new generation of organs: many fixed stops, drawbar sound, piano, string orchestra and electronic registration memory.

The beautiful cabinet from selected hardwoods and the timeless design will harmonize with any decor.

This is the ideal organ for the beginning to more advanced keyboard player.

Like Franz Lambert you can play „big” even on the „smallest” WERSI Organ.



Franz Lambert played the ORION W1 S. He was pleasantly surprised with what he heard.

The ORION W1 S is an ideal home spinet. It occupies little floor space but offers a surprising variety of musical features. Compare its qualities with other larger organs.

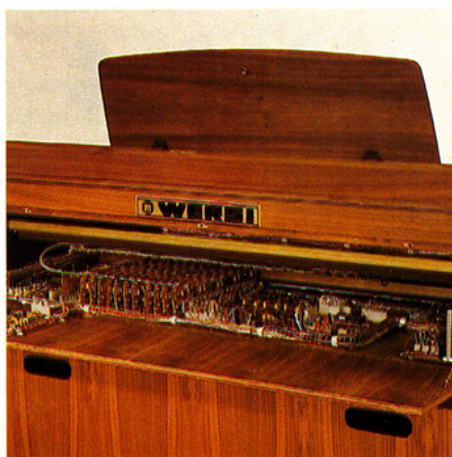
All subunits in the organ are easily accessible with the help of the WERSI hinge system. This makes the do-it-yourself construction easy.



The WERSIMATIC rhythm and auto accompaniment adds real fun to your playing. At the touch of a button any desired rhythm complements your keyboard talents.

All subunits in the organ are easily accessible with the help of the WERSI hinge system. This makes the do-it-yourself construction easy.

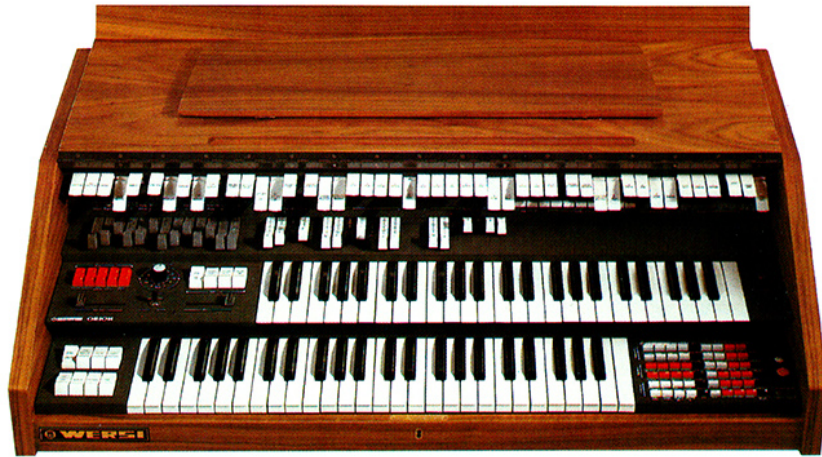
Store a chord on the lower manual – and the auto accompaniment underlines the melody with an array of chords and a walking bass.



You can show off your WERSI Organ on the inside too. The layout is clean and looks professional.

WERSI Organ ORION W1S

At this point may we recommend to you three sensible option levels. Each offers its own price advantages.



Kit Pak

Order No.

	page 48	page 50	page 52	page 54	page 56		
Option Level 1 The organ is equipped with a drawbar system and a number of special effects. It already can be played via an outboard amplifier or stereo.	1	2	3	4	5		053
Option Level 2 This extension contains a power amplifier, fixed stops and the fully equipped pedals. In addition you receive the WERSIVOICE for rotating sound and string choir and the full set of special effects.	●	●	●	●	●		054
Option Level 3 The third level adds the piano, the WERSIDATA registration memory and the WERSIMATIC rhythm and auto accompaniment. With this your organ is equipped with all options.	●	●	●	●	●	●	055

Each Kit Pak is available individually. The corresponding order numbers can be found in the price list.

The WERSI organ system makes it easy to customize your own organ. You plan the order with individual Kit Paks or according to option levels. The musical and technical descriptions of each Kit Pak are found on pages 48 through 71 of this catalog.

The **WERSI** Organ **ORION W1S**
offers



Kit Pak 1	Tone Generation	Precision Master Generator, 8 octaves plus pitch shift (slalomatic) over additional octave. MOS-LSI technology. Sinewave, square wave, sawtooth and pulsed wave forms available simultaneously.
Kit Pak 1	Generator Functions	Continuous vibrato, delayed vibrato, slalom, slalomatic, transposer, master pitch control, Hawaii-effect.
Kit Pak 3	Upper Manual	
Kit Pak 3	Number of keys	49 keys, C to C (4 octaves)
Kit Pak 2	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1'
Kit Pak 7	15 Fixed Stops	Cello 16', Horn 16', Trombone 16', Saxophone 16', Flute 8', Viola 8', Clarinet 8', Oboe 8', Trumpet 8', Flute 4', Violin 4', Nasat 2-2/3', Piccolo 2', Flute 1', Mixture 3-fold.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
Kit Pak 3	Lower Manual	
Kit Pak 3	Number of keys	49 keys, C to C (4 octaves)
Kit Pak 2	Drawbars	8', 4', 2-2/3', 2'
Kit Pak 7	8 Fixed Stops	Viola 8', Principal 8', Horn 8', Violin 4', Principal 4', Nasat 2-2/3', Principal 2', Salicional 2'.
Kit Pak 3	Functions for all footages	Polyphonic fast attack standard, soft attack and sustain optional.
Kit Pak 8	Pedal	13 pedals (steel)
	Drawbars	16', 8'
	4 Fixed Stops	Tuba, Trumpet, Stringbass, Bass Guitar.
	Functions	Short/long sustain, 3 independent envelopes.
Kit Pak 3	Sustain	Upper manual all footages optional for lower manuals.
Kit Pak 11	Special Effects	Solo/legato percussion, repeat, contracussion, tremolo, second voice, hand wah-wah, triggered autowah, free run autowah.
Kit Pak 11	Pre-Sets	Fixed stops, drawbars, 2nd harmonic, 3rd harmonic.
Kit Pak 12	Piano Voices	Piano, Celeste, Kinura, Honkytonk, Harpsichord, Banjo with the functions tremolo, echo and damper. Variable echo and tremolo speeds.
Kit Pak 1+10	Vibratos	Continuous frequency vibrato, delayed vibrato. WERSIVOICE rotating baffle effect with 2 speeds and 3 intensities. Drawbars, fixed stops, special effects, piano and pedal can be assigned separately to the WERSIVOICE.
Kit Pak 5	Reverb	Large spring unit with 3 programmable reverb degrees.
Kit Pak 14	WERSIMATIC Rhythm	24 rhythm patterns, 15 instruments, touch control and automatic, snare roll, drum break, pre-set and variable tempo, alternating rhythms.
Kit Pak 14	WERSIMATIC Accompaniment	Phantom accompaniment with or without memory for walking bass, low chords and arpeggiated high chords.
Kit Pak 10	String Orchestra	Built-in string orchestra using WERSIVOICE and string voices of both manuals and pedals.
Kit Pak 5 + 6	Amplifiers	Preamplifier and 70 Watt power amplifier with active treble and bass control. Swell shoe with compensated loudness control.
Kit Pak 6	Loudspeakers	2 high efficiency 30 Watt speakers and 2 tweeters.
Kit Pak 13	WERSIDATA Programming	10 programs on plug-in boards for both manuals and pedals. Programs have random access and are changeable.
Kit Pak 5 + 6	Interface	Connectors for tape record/playback, headphones, external speakers, tone cabinets and amplifiers.
Kit Pak 4	Finish	American black walnut, locking lid
	Dimensions	height: 37 3/4", width: 42 1/4", depth: 24 1/2"

WERSI Organ HELIOS W2T

The professional features of this deluxe portable spinet boast considerable musical expression capabilities.



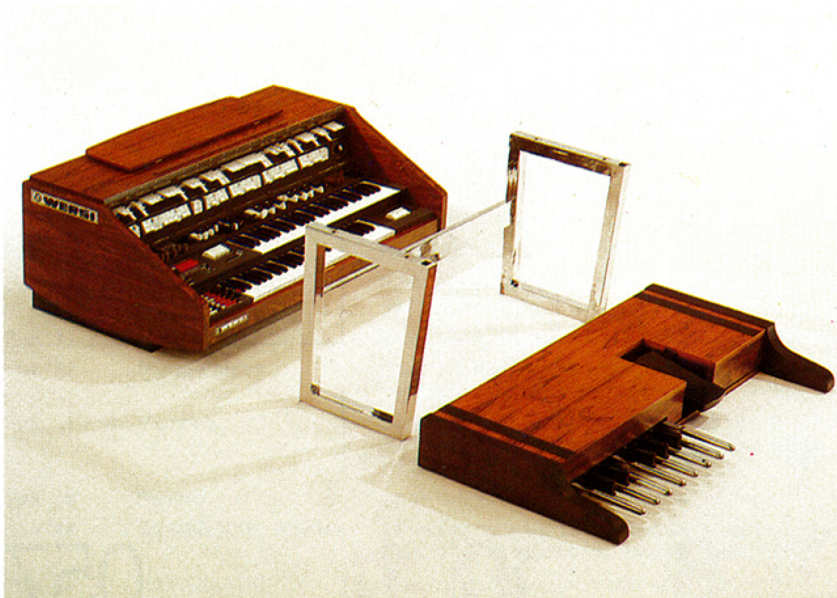
The „Helios“ W2T offers all advantages of WERSI's new generation of organs: many fixed stops, full drawbar sound, piano, string orchestra, electronic registration memory and many special effects and playing aids.

The elegant styling of the W2T with its chrome legs makes it an asset in your home and on stage. This is the ideal organ for the professional and the demanding home musician.



Curt Prina,
organist with Hazy Osterwald.

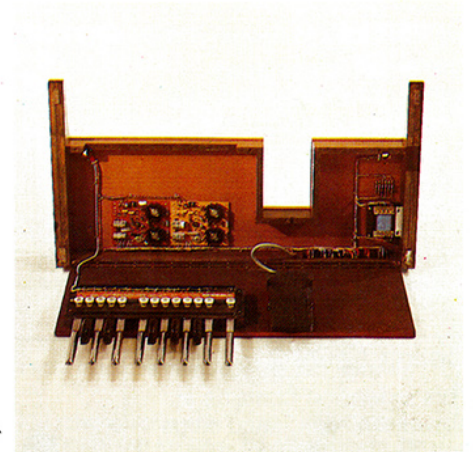
Many musicians would like to own an organ they can travel with but which also looks good in their home. The HELIOS W2T is such an instrument.



The HELIOS W2T
ready to go.

The HELIOS W2T possesses all features of a deluxe spinet and more. For the sound reproduction we recommend our tone cabinets on pages 46 and 47.

Should you want to move the HELIOS W2T it can be easily disassembled into three parts – top, base and chrome legs.



A view of the opened
organ base.

Hidden in the pedal base are twin amplifiers. Speakers or tone cabinets are the only external elements needed.

WERSI Organ HELIOS W2T



At this point may we recommend to you three sensible option levels. Each offers its own price advantages.

Kit Pak

Order No.

	page 48	page 50	page 52	page 54	page 56		
Option Level 1 The organ is equipped with a drawbar system and a number of special effects. It already can be played via an outboard amplifier or stereo.	1	2	3	4	5		056
Option Level 2 This extension contains a power amplifier, fixed stops and the fully equipped pedals. In addition you receive the WERSIVOICE for rotating sound and string choir and the full set of special effects.	●	●	●	●	●		057
Option Level 3 The third level adds the PIANO, the WERSIDATA registration memory and the WERSIMATIC rhythm and auto accompaniment. With this your organ is equipped with all options.	●	●	●	●	●	●	058
	page 58	page 59	page 60	page 61	page 62	page 64	
	page 65	page 66	page 68	-71			

Each Kit Pak is available individually. The corresponding order numbers can be found in the price list.

The WERSI organ system makes it easy to customize your own organ. You plan the order with individual Kit Paks or according to option levels. The musical and technical descriptions of each Kit Pak are found on pages 48 through 71 of this catalog.

The **WERSI** Organ **HELIOS** W2T offers



Kit Pak 1	Tone Generation	Precision Master Generator, 8 octaves plus pitch shift (slomatic) over additional octave. MOS-LSI technology. Sinewave, square wave, sawtooth and pulsed wave forms available simultaneously.
Kit Pak 1	Generator Functions	Continuous vibrato, delayed vibrato, slalom, slomatic, transposer, master pitch control, Hawaii-effect.
Kit Pak 3	Upper Manual	
Kit Pak 3	Number of keys	49 keys, C to C (4 octaves)
Kit Pak 2	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1', 4/5', 2/3'.
Kit Pak 7	18 Fixed Stops	Cello 16', Horn 16', Accordion 16', Trombone 16', Saxophone 16', Horn 8', Viola 8', Clarinet 8', Oboe 8', Flute 8', Trumpet 8', Flute 4', Violin 4', Nasat 2-2/3', Principal 2', Piccolo 1', Cymbal 5-fold, Mixture 3-fold.
Kit Pak 3	Functions vor all footages	Polyphonic fast/soft attack, short/medium/long sustain.
	Lower Manual	
Kit Pak 3	Number of keys	49 keys, C to C (4 octaves).
Kit Pak 2	Drawbars	8', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1'.
Kit Pak 7	12 Fixed Stops	Gedackt 8', Viola 8', Principal 8', Horn 8', Violin 4', Principal 4', Nasat 2-2/3', Principal 2', Third 1-3/5', Fifth 1-1/3', Piccolo 1', Mixture 2-fold.
Kit Pak 3	Functions for all footages	Polyphonie fast/soft attack, short/medium/long sustain.
Kit Pak 8	Pedal	13 pedals (steel)
	Drawbars	16', 8', 4', 2', 1' + 1/2'
	4 Fixed Stops	Tuba, Trumpet, Stringbass, Bass Guitar
	Functions	Short/long sustain, 3 independent envelopes.
Kit Pak 3	Sustain	For all footages of upper and lower manuals.
Kit Pak 11	Special Effects	Solo/legato percussion, repeat, contracussion, tremolo, second voice, hand wah-wah, triggered autowah, free run autowah.
Kit Pak 11	Pre-Sets	Fixed stops, drawbars, 2nd harmonic, 3rd harmonic.
Kit Pak 12	Piano Voices	Piano, Celeste, Kinura, Honkytonk, Harpsichord, Banjo with the functions tremolo, echo and damper. Variable echo and tremolo speeds.
Kit Pak 1 + 10	Vibratos	Continuous frequency vibrato, delayed vibrato. WERSIVOICE rotating baffle effect with 2 speeds and 3 intensities. Drawbars, fixed stops, special effects, piano and pedal can be assigned separately to the WERSIVOICE.
Kit Pak 5	Reverb	Large spring unit with 3 programmable reverb degrees.
Kit Pak 14	WERSIMATIC Rhythm	24 rhythm patterns, 15 instruments, touch control and automatic, snare roll, drum break, pre-set and variable tempo, alternating rhythms. Stereo output.
Kit Pak 14	WERSIMATIC Accompaniment	Phantom accompaniment with or without memory for walking bass, low chords and arpeggiated high chords. Stereo output.
Kit Pak 10	String Orchestra	Built-in string orchestra using WERSIVOICE and string voice of both manuals and pedals.
Kit Pak 5 + 6	Amplifiers	2 preamplifiers with active treble and bass controls. 2 power amplifiers 70 Watts. Manuals, special effects and WERSIVOICE assignable to left or right channel. Swell shoe with compensated loudness control.
Kit Pak 13	WERSIDATA Programming	20 Programs on plug-in boards for both manuals and pedals. Programs have random access and are changeable.
Kit Pak 5 + 6	Interface	Connectors for tape record/playback, headphones, external speakers, tone cabinets and amplifiers.
Kit Pak 4	Finish	American black walnut, locking lid. Top and pedal base joined by chrome legs.
	Dimensions	Top: height: 15 3/4", width: 45 1/4", depth: 26 3/4" Base: height: 5 1/2", width: 45 1/4", depth: 24" Total: height: 40 3/4", width: 45 1/4", depth: 26 3/4"

WERSI Organ **HELIOS** W2S

This deluxe spinet with its professional features fills the desires you may have with respect to flexibility, versatility and musical capabilities.



The „Helios“ W2S offers all advantages of WERSI's new generation of organs: many fixed stops, full drawbar sound, piano, string orchestra, electronic registration memory and many special effects and playing aids.

The modern design of the cabinets with selected hardwoods please the eye and fits nicely in all surroundings. This is the ideal organ for the professional and the demanding home musician.

Klaus Wunderlich called the WERSIDATA programming "... a development providing new dimensions yet to be explored."



Klaus Wunderlich at the HELIOS

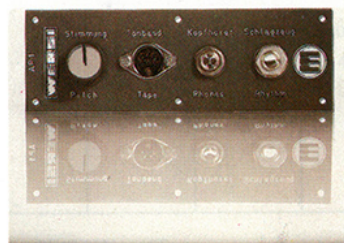
The HELIOS W2S can be equipped with an optional 25-pedal clavier.



The model HELIOS W2S is, like most WERSI organs, equipped with two amplifier/speaker systems. WERSI puts as much emphasis on the sound reproduction as on the internal electronics. You can spoil yourself even more by adding tone cabinets (see pages 46 and 47).

The WERSIDATA program augments the results of your organ playing tremendously. At the touch of a button you can change between complex registrations in a fraction of a second. WERSIDATA helps the beginner as well as the accomplished musician.

Organ Interface Panel is standard equipment with all WERSI Organs.



The HELIOS W2S can be equipped with an optional 25-pedal clavier. The conversion is accomplished by setting the organ on a pedestal.

WERSI Organ HELIOS W2S

At this point may we recommend to you three sensible option levels. Each offers its own price advantages.



Kit Pak

Order No.

	page 48	page 50	page 52	page 54	page 56		
Option Level 1 The organ is equipped with a drawbar system and a number of special effects. It already can be played via an outboard amplifier or stereo.	1	2	3	4	5		059
Option Level 2 This extension contains a power amplifier, fixed stops and the fully equipped pedals. In addition you receive the WERSIVOICE for rotating sound and string choir and the full set of special effects.	●	●	●	●	●		060
	6	7	8		10	11	
	page 58	page 59	page 60	page 61	page 62	page 64	
Option Level 3 The third level adds the piano, the WERSIDATA registration memory and the WERSIMATIC rhythm and auto accompaniment. With this your organ is equipped with all options.	●	●	●	●	●	●	061
	12	13	14				
	page 65	page 66	page 68	-71			

Each Kit Pak is available individually. The corresponding order numbers can be found in the price list.

The WERSI organ system makes it easy to customize your own organ. You plan the order with individual Kit Paks or according to option levels. The musical and technical descriptions of each Kit Pak are found on pages 48 through 71 of this catalog.



The **WERSI** Organ **HELIOS W2S** offers

Kit Pak 1	Tone Generation	Precision Master Generator, 8 octaves plus pitch shift (slomatic) over additional octave. MOS-LSI technology. Sinewave, square wave, sawtooth and pulsed wave forms available simultaneously.
Kit Pak 1	Generator Functions	Continuous vibrato, delayed vibrato, slalom, slomatic, transposer, master pitch control, Hawaii-effect.
Kit Pak 3	Upper Manual	
Kit Pak 3	Number of keys	49 keys, C to C (4 octaves)
Kit Pak 2	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1', 4/5', 2/3'.
Kit Pak 7	18 Fixed Stops	Cello 16', Horn 16', Accordion 16', Trombone 16', Saxophone 16', Horn 8', Viola 8', Clarinet 8', Oboe 8', Flute 8', Trumpet 8', Flute 4', Violin 4', Nasat 2-2/3', Principal 2', Piccolo 1', Cymbal 5-fold, Mixture 3-fold.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
	Lower Manual	
Kit Pak 3	Number of keys	49 keys, C to C (4 octaves).
Kit Pak 2	Drawbars	8', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1'.
Kit Pak 7	12 Fixed Stops	Gedackt 8', Viola 8', Principal 8', Horn 8', Violin 4', Principal 4', Nasat 2-2/3', Principal 2', Third 1-3/5', Fifth 1-1/3', Piccolo 1', Mixture 2-fold.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
Kit Pak 8	Pedal	13 pedals (steel), 25 pedals optional
	Drawbars	16', 8', 4', 2', 1 + 1/2'.
	4 Fixed Stops	Tuba, Trumpet, Stringbass, Bass Guitar
	Functions	Short/long sustain, 3 independent envelopes.
Kit Pak 3	Sustain	For all footages of upper and lower manuals.
Kit Pak 11	Special Effects	Solo/legato percussion, repeat, contracussion, tremolo, second voice, hand wah-wah, triggered autowah, free run autowah.
Kit Pak 11	Pre-Sets	Fixed stops, drawbars, 2nd harmonic, 3rd harmonic.
Kit Pak 12	Piano Voices	Piano, Celeste, Kinura, Honkytonk, Harpsichord, Banjo with the functions tremolo, echo and damper. Variable echo and tremolo speeds.
Kit Pak 1 + 10	Vibratos	Continuous frequency vibrato, delayed vibrato. WERSIVOICE rotating baffle effect with 2 speeds and 3 intensities. Drawbars, fixed stops, special effects, piano and pedal can be assigned separately to the WERSIVOICE.
Kit Pak 5	Reverb	Large spring unit with 3 programmable reverb degrees.
Kit Pak 14	WERSIMATIC Rhythm	24 rhythm patterns, 15 instruments, touch control and automatic, snare roll, drum break, pre-set and variable tempo, alternating rhythms. Stereo output.
Kit Pak 14	WERSIMATIC Accompaniment	Phantom accompaniment with or without memory for walking bass, low chords and arpeggiated high chords. Stereo output.
Kit Pak 10	String Orchestra	Built-in string orchestra using WERSIVOICE and string voices of both manuals and pedals.
Kit Pak 5 + 6	Amplifiers	2 preamplifiers with active treble and bass controls. 2 power amplifiers 70 Watts. Manuals, special effects and WERSIVOICE assignable to left or right channel. Swell shoe with compensated loudness control.
Kit Pak 6	Loudspeakers	2 high efficiency 50 Watt speakers and 2 tweeters.
Kit Pak 13	WERSIDATA Programming	20 programs on plug-in boards for both manuals and pedals. Programs have random access and are changeable.
Kit Pak 5 + 6	Interface	Connectors for tape record/playback, headphones, external speakers, tone cabinets and amplifiers.
Kit Pak 4	Finish	American black walnut, locking lid.
	Dimensions	height: 41 1/4", width: 45 1/4", depth: 26 3/4"

WERSI Organ ZENITH W3S

On this console organ you can produce the entire spectrum of musical expressions – ranging from classical over liturgical to demanding theatre music.



The „Zenith“ W3S offers all advantages of WERSI's new generation of organs: many fixed stops, full drawbar sound, string orchestra, electronic registration memory and additional musical values.

The styling of this console organ and the use of beautiful hardwood veneers make this organ a focal point in your home.

This organ is the ideal organ for the demanding musician requiring two full manuals and full pedals.

Berry Lipman at the ZENITH.



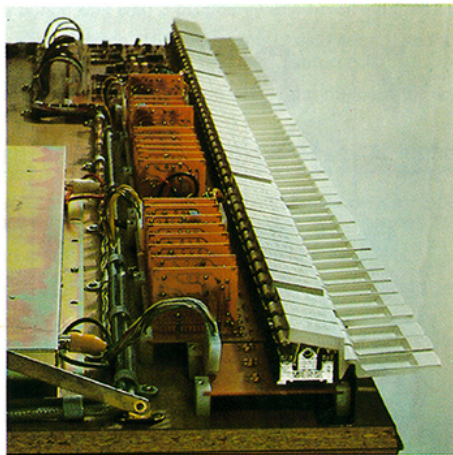
Many music lovers look for an organ on which they can play entertainment type music as well as works of the classical and liturgical realm. The WERSI organ ZENITH W3 S fills these requirements.

A glance at the Playing Table of the ZENITH.



Berry Lipman was impressed by the excellent stereophonic sound of the new WERSI organs. Selected assignment of, for example, the solo voice to the right – bass to the center – accompaniment to the left creates a transparent impression.

Carefully worked out details in all WERSI Instruments.



All WERSI organs have electronic keying with direct or soft tone attack making them suited for all types of music.

The model ZENITH W3 S has a large number of footages. It is equipped standard with 2 WERSI-VOICES, one for string choir and the other for the rotating baffle sound.

At this point may we recommend to you three sensible option levels. Each offers its own price advantages.



Kit Pak

Order No.

<p>Option Level 1 The organ is equipped with a drawbar system and a number of special effects. It already can be played via an outboard amplifier or stereo.</p>	page 48 1	page 50 2	page 52 3	page 54 4	page 56 5			<p>062</p>	
<p>Option Level 2 This extension contains a power amplifier, fixed stops and the fully equipped pedals. In addition you receive the WERSIVOICE for rotating sound and string choir and the full set of special effects.</p>	●	●	●	●	●				<p>063</p>
<p>Option Level 3 The third level adds the piano, the WERSIDATA registration memory and the WERSIMATIC rhythm and auto accompaniment. With this your organ is equipped with all options.</p>	●	●	●	●	●	●	●		
	page 58	page 59	page 60	page 61	page 62	page 64			
	page 65	page 66	page 68	-71					

Each Kit Pak is available individually. The corresponding order numbers can be found in the price list.

The WERSI organ system makes it easy to customize your own organ. You plan the order with individual Kit Paks or according to option levels. The musical and technical descriptions of each Kit Pak are found on pages 48 through 71 of this catalog.

The WERSI Organ ZENITH W3S offers



Kit Pak 1	Tone Generation	Precision Master Generator, 8 octaves plus pitch shift (slalomatic) over additional octave. MOS-LSI technology. Sinewave, square wave, sawtooth and pulsed wave forms available simultaneously.
Kit Pak 1	Generator Functions	Continuous vibrato, delayed vibrato, slalom, slalomatic, transposer, master pitch control, Hawaii-effect.
	Upper Manual	
Kit Pak 3	Number of keys	61 keys, C to C (5 octaves)
Kit Pak 2	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1-1/7', 1', 8/9', 3/5', 2/3'.
Kit Pak 7	22 Fixed Stops	Principal 16', Cello 16', Horn 16', Accordion 16', Trombone 16', Saxophone 16', English Horn 8', Principal 8', Viola 8', Clarinet 8', Oboe 8', Schalmei 8', Trumpet 8', Flute 4', Violin 4', Nasat 2-2/3', Principal 2', Third 1-3/5', Fifth 1-1/3', Piccolo 1', Cymbal 2-fold, Mixture 4-fold.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
	Lower Manual	
Kit Pak 3	Number of keys	61 keys, C to C (5 octaves)
Kit Pak 2	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1-1/7', 1', 8/9', 3/5', 2/3'.
Kit Pak 7	17 Fixed Stops	Cello 16', Bourdon 16', Principal 16', Viola 8', Principal 8', Gedackt 8', Horn 8', Violin 4', Principal 4', Nasat 2-2/3', Principal 2', Flute 2', Third 1-3/5', Fifth 1-1/3', Piccolo 1', Mixture 2-fold and 4-fold.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
Kit Pak 8	Pedals	30 pedals, flat radiating
	Drawbars	16', 8', 4', 2', 1 + 1/2'.
	4 Fixed Stops	Tuba, Trumpet, Stringbass, Bass Guitar.
	Functions	Short/long sustain, 3 independent envelopes.
Kit Pak 3	Sustain	For all footages of upper and lower manuals.
Kit Pak 11	Special Effects	Solo/legato percussions, repeat, contraccussion, tremolo, second voice, hand wah-wah, triggered autowah, free run autowah.
Kit Pak 11	Pre-Sets	Fixed stops, drawbars, 2nd harmonic, 3rd harmonic.
Kit Pak 12	Piano Voices	Piano, Celeste, Kinura, Honkytonk, Harpsichord, Banjo with the functions tremolo, echo and damper. Variable echo and tremolo speeds.
Kit Pak 1 + 10	Vibratos	Continuous frequency vibrato, delayed vibrato. WERSIVOICE rotating baffle effect with 2 speeds and 3 intensities. Drawbars, fixed stops, special effects, piano and pedal can be assigned separately to the WERSIVOICE.
Kit Pak 5	Reverb	Large spring unit with 3 programmable reverb degrees.
Kit Pak 14	WERSIMATIC Rhythm	24 rhythm patterns, 15 instruments, touch control and automatic, snare roll, drum break, pre-set and variable tempo, alternating rhythms. Stereo output.
Kit Pak 14	WERSIMATIC Accompaniment	Phantom accompaniment with or without memory for walking bass, low chords and arpeggiated high chords. Stereo output.
Kit Pak 10	String Orchestra	Built-in string orchestra using WERSIVOICE and string voices of both manuals and pedals. With the 2 WERSIVOICES string orchestra and rotating baffle sound are simultaneously available.
Kit Pak 5 + 6	Amplifiers	2 preamplifiers with active treble and bass controls. 2 power amplifiers 70 Watts. Manuals, special effects and WERSIVOICE assignable to left or right channel. Swell shoe with compensated loudness control.
Kit Pak 6	Loudspeakers	2 high efficiency 50 Watt speakers and 2 tweeters.
Kit Pak 13	WERSIDATA Programming	20 programs on plug-in boards for both manuals and pedals. Programs have random access and are changeable.
Kit Pak 5 + 6	Interface	Connectors for tape record/playback, headphones, external speakers, tone cabinets and amplifiers.
Kit Pak 4	Finish	American black walnut, locking lid
	Dimensions	height: 44 1/2", width: 53 1/2", depth: 26 3/4"

WERSI Organ CLASSICA W3 SK

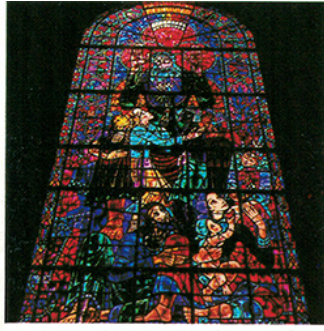
WERSI designed this organ especially for the liturgical and classical realm of music. The serious organist can interpret the most complex literature on the „Classica” W3 SK.



WERSI equipped the „Classica” with a rich array of features. It offers a finely tuned disposition, beautiful solo voices, flute, principal and reed choirs and couplers. The organist will also appreciate the electronic combination action.

A noble but modest styling together with beautiful finished hardwood lend a look of distinction to the „Classica” W3 SK.

This is the ideal organ for the classical organist in church or home.



Famous musicians and church organists have assisted with their advise during the design phases of the CLASSICA. The result is an organ which satisfies all requirements for liturgical interpretations.

WERSI added such features as string choirs, piano and harpsichord to cover classical orchestrations too.

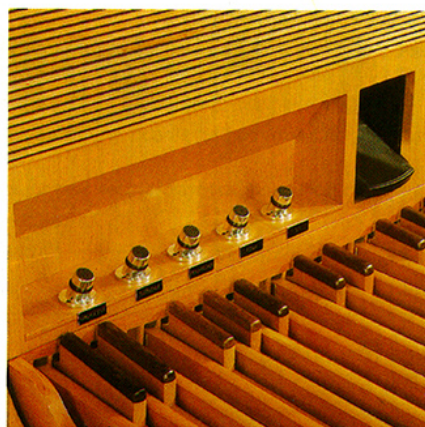
The sound reproduction of a church console is an important factor. The tone cabinets shown on page 47 are perfectly suited for most applications. Please do not hesitate to consult us when designing your particular sound system.

The CLASSICA is standard equipped with stereophonic outputs. It can be easily expanded to 3 or more channels.

The CLASSICA with two Tower Speakers – a musical gem for church and home.



It might interest the church organist to know the formant filters for the fixed stops can be optionally equipped with connectors. By replacing certain registers he can create new dispositions. The CLASSICA is further marked by its couplers and electronic Combination Action.



Foot-actuated Combination Action.



Couplers and Combination Action at your finger tips.

WERSI Organ CLASSICA W3SK



At this point may we recommend to you three sensible option levels. Each offers its own price advantages.

Kit Pak

Order No.

	page 48	page 50	page 52	page 54	page 56		
Option Level 1 The organ is equipped with a drawbar system. It already can be played via an outboard amplifier or stereo.	1	2	3	4	5		065
Option Level 2 This extension contains a power amplifier, fixed stops and the fully equipped pedals. In addition you receive the WERSIVOICE for rotating sound and string choir.	●	●	●	●	●		066
Option Level 3 The third level adds the piano and the WERSIDATA registration memory. With this your organ is equipped with all options.	● ●	● ●	●	● ●	● ●		067
	page 58	page 59	page 60	page 61	page 62	page 64	
	12	13					
	page 65	page 66	page 68	-71			

Each Kit Pak is available individually. The corresponding order numbers can be found in the price list.

The WERSI organ system makes it easy to customize your own organ. You plan the order with individual Kit Paks or according to option levels. The musical and technical descriptions of each Kit Pak are found on pages 48 through 71 of this catalog.



Kit Pak 1	Tone Generation	Precision Master Generator, 8 octaves plus pitch shift (slalomatic) over additional octave. MOS-LSI technology. Sinewave, square wave, sawtooth and pulsed wave forms available simultaneously.
Kit Pak 1	Generator Functions	Continuous vibrato, delayed vibrato transposer, master pitch control.
Kit Pak 3	Upper Manual	
Kit Pak 2	Number of keys	61 keys, C to C (5 octaves)
Kit Pak 7	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1', 2/3', 1/2', 1/4'.
Kit Pak 7	24 Fixed Stops	Principal 16', Gedackt 16', Trombone 16', Cello 16', Flugelhorn 16', Viola 8', Principal 8', Flute 8', Oboe 8', Horn 8', Trumpet 8', Clarinet 8', Principal 4', Violin 4', Flute 4', Nasat 2-2/3', Principal 2', Flute 2', Piccolo 1', Third 1-3/5', Fifth 1-1/3', Minor 16/19', Cymbal 6-fold, Mixture 4-fold.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
	Lower Manual	
Kit Pak 3	Number of keys	61 keys, C to C (5 octaves)
Kit Pak 2	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1', 2/3', 1/2', 1/3'.
Kit Pak 7	22 Fixed Stops	Principal 16', Bourdon 16', Cello 16', Trumpet 16', Viola 8', Principal 8', Schalmel 8', Trumpet 8', Bass-flute 8', Violin 4', Principal 4', Flute 4', Nasat 2-2/3', Principal 2', Flute 2', Third 1-3/5', Fifth 1-1/3', Piccolo 1', Ninth 8/9', Octave 1/2', Mixture 5-fold and 8-fold.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
Kit Pak 9	Pedal	30 pedals, double radiating.
	Drawbars	16', 10-2/3', 8', 4', 2', 1-1/3', 1', 1/2'.
	14 Fixed Stops	Untersatz 32', Subbass 16', Principal 16', Trombone 16', Bassflute 8', Principal 8', Krummhorn 8', Trumpet 8', Violoncello 8', Principal 4', Flute 4', Clarina 4', Nachthorn 2', Mixture 5-fold.
Kit Pak 3	Sustain	For all footages of upper and lower manuals and pedals.
Kit Pak 12	Piano Voices	Piano, Celeste, Kinura, Honkytonk, Harpsichord, Banjo with the functions tremolo, echo and damper. Variable echo and tremolo speeds.
Kit Pak 3	Couplers	Manual coupler (u/manual to l/manual) and pedal coupler (l/manual to pedal) and u/manual plus l/manual to pedal
Kit Pak 7	Intonation	Stop arrangement intonation and disposition can be optionally selected.
Kit Pak 13	Playing Assistance	Manual stops, cancels, prepared for future electronic combination action.
Kit Pak 12	Piano Voices	Piano, Celeste, Kinura, Honkytonk, Harpsichord, Banjo with the functions tremolo, echo and damper. Variable echo and tremolo speeds.
Kit Pak 1 + 10	Vibratos	Continuous frequency vibrato, delayed vibrato. WERSIVOICE rotating baffle effect with 2 speeds and 3 intensities. Drawbars, fixed stops, special effects, piano and pedal can be assigned separately to the WERSIVOICE.
Kit Pak 13	Fixed Combinations	Flute, principal and reed choirs, plenum, tutti, solo voices, string orchestra, piano and drawbars.
Kit Pak 5	Reverb	Large spring unit with 3 programmable reverb degrees.
Kit Pak 5	Swell Shoe	Swell shoe with compensated loudness control and optical position indicator.
Kit Pak 10	String Orchestra	Built-in string orchestra using WERSIVOICE and string voices of both manuals and pedals.
Kit Pak 5 + 6	Amplifiers	2 preamplifiers with active treble and bass controls. 2 power amplifiers 70 Watts. Manuals and WERSIVOICE assignable to left or right channel. Expandable to third channel for pedals.
Kit Pak 6	Loudspeakers	2 high efficiency 50 Watt speakers and 2 tweeters.
Kit Pak 13	WERSIDATA Programming	10 programs on plug-in boards for both manuals and pedals. Programs have random access and are changeable.
Kit Pak 5 + 6	Interface	Connectors for tape record/playback, headphones, external speakers, tone cabinets and amplifiers.
Kit Pak 4	Finish	Light oak, locking lid.
	Dimensions	height: 45 3/4", width: 53 1/2", depth: 26 3/4"

WERSI Organ GALAXY W4 SKT

This is THE ORGAN. With this extraordinary organ machine WERSI reaches far into the technological and musical future. Consistent application of advanced computer electronics opens a vast array of potentials which cannot be found in any other instrument in its class.

To our knowledge there is no music written which cannot be interpreted on this uncompromising instrument. In addition, it invites you to indulge yourself in its unprecedented spectrum of innovations.



The contemporary even futuristic styling, together with the exotic wood exterior, is evidence that WERSI here presents its Flagship.

This is the ideal organ for the accomplished musician who loves the unusual and for the professional interpreter who has outgrown the boundaries of conventional instruments.

The GALAXY is living evidence of the sum total possibilities that exist today in the design of electronic organs. Unprecedented technical efforts, extra-ordinary band width of musical expression and exotic styling are the results of WERSI's expertise. The GALAXY is an organ second to none. And – remember it's a kit.



Franz Lambert at the GALAXY.

The GALAXY with two Tower Speakers – a combination that will capture your audience.

The GALAXY is the Flagship of WERSI's organ line. You can't walk past it without stopping.

It is a futile attempt to list the GALAXY's features in a sentence or two. Let's just mention that each of the manuals has 13 footages, that there are two generators and two WERSIVOICES. Be it entertainment music, classical and liturgical renditions or synthesizer-like experiments – the GALAXY can handle it. The GALAXY is a challenge to every musician.



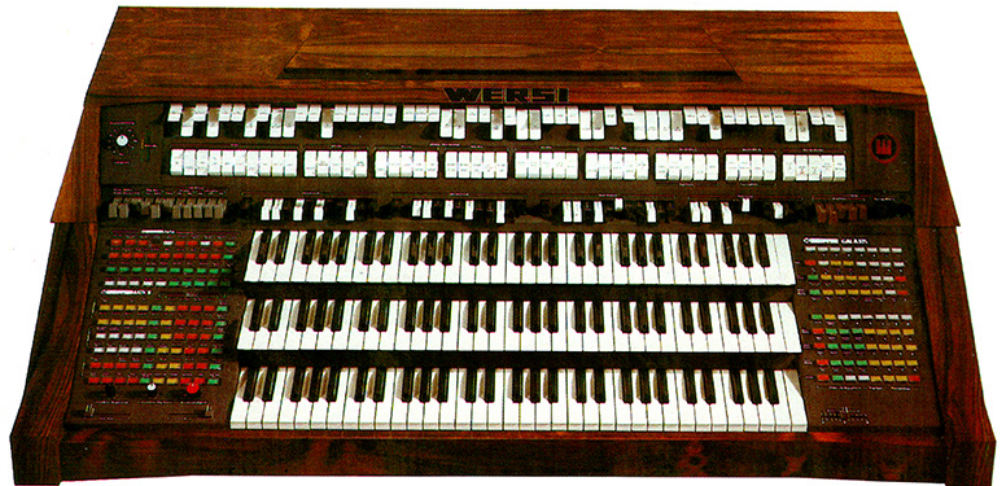
A shot of the Control Center of the GALAXY.



And that's how the GALAXY looks from the other side.

WERSI Organ GALAXY W4SKT

At this point may we recommend to you three sensible option levels. Each offers its own price advantages.



Kit Pak

Order No.

<p>Option Level 1</p> <p>The organ is equipped with a drawbar system and a number of special effects. It already can be played via an outboard amplifier or stereo.</p>	page 48	page 50	page 52	page 54	page 56		
	1	2	3	4	5		068
<p>Option Level 2</p> <p>This extension contains a power amplifier, fixed stops and the fully equipped pedals. In addition you receive the WERSIVOICE for rotating sound and string choir and the full set of special effects.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	6	7	8		10	11	069
	page 58	page 59	page 60	page 61	page 62	page 64	
<p>Option Level 3</p> <p>The third level adds the piano, the WERSIDATA registration memory and the WERSIMATIC rhythm and auto accompaniment. With this your organ is equipped with all options.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	12	13	14				070
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Each Kit Pak is available individually. The corresponding order numbers can be found in the price list.

The WERSI organ system makes it easy to customize your own organ. You plan the order with individual Kit Paks or according to option levels. The musical and technical descriptions of each Kit Pak are found on pages 48 through 71 of this catalog.

The WERSI Organ GALAXY W4 SKT offers



Kit Pak 1	Tone Generation with 2 generators	2 precision Master Generators, 8 octaves plus pitch shift (slalomatic) over additional octave. MOS-LSI technology. Sinewave, square wave, sawtooth and plused wave forms available simultaneously. 1 Generator for upper and middle manual and for pedals. 1 generator for upper manual. Both generators assignable to upper manual.
Kit Pak 1	Generator Functions	Continuous vibrato, delayed vibrato, slalom, slalomatic, transposer, master pitch control, Hawaii-effect.
Kit Pak 3	Upper Manual	
Kit Pak 3	Number of keys	61 keys, C to C (5 octaves)
Kit Pak 2	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1-1/7', 1', 8/9', 3/5', 2/3'.
Kit Pak 7	15 Fixed Stops	Cello 16', Trombone 16', Accordion 16', Bass clarinet 16', Saxophone 16', English Horn 8', Viola 8', Clarinet 8', Schalmel 8', Trumpet 8', Flute 4', Violin 4', Principal 2', Cymbal 2-fold, Mixture 5-fold. 2 sets of fixed stops, one for each generator.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
	Lower Manual	
Kit Pak 3	Number of keys	61 keys, C to C (5 octaves)
Kit Pak 2	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1-1/7', 1', 8/9', 3/5', 2/3'.
Kit Pak 7	14 Fixed Stops	Cello 16', Bourdon 16', Principal 16', Gedackt 8', Viola 8', Principal 8', Flute 4', Principal 4', Nasat 2-2/3', Principal 2', Third 1-3/5', Fifth 1-1/3', Piccolo 1', Cymbal 5-fold, Mixture 3-fold.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
	Middle Manual	
Kit Pak 3	Number of keys	61 keys, C to C (5 octaves)
Kit Pak 2	Drawbars	16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1-1/7', 1', 8/9', 3/5', 2/3'.
Kit Pak 7	15 Fixed Stops	Cello 16', Bassoon 16', Trombone 16', Flute 8', Viola 8', Clarinet 8', Oboe 8', Trumpet 8', Flute 4', Violin 4', Nasat 2-2/3', Piccolo 2', Flute 1', Mixture 2-fold.
Kit Pak 3	Functions for all footages	Polyphonic fast/soft attack, short/medium/long sustain.
Kit Pak 8	Pedal	30 pedals (steel), flat radiating
	Drawbars	16', 8', 4', 2', 1 + 1/2'.
	4 Fixed Stops	Tuba, Trumpet, Stringbass, Bass Guitar.
	Functions	Short/long sustain, 3 independent envelopes.
Kit Pak 1	Orchestra Effects	The 2 generators and the manual couplers allow orchestral effects. Beat between generators adjustable.
Kit Pak 3	Sustain	For all footages in all manuals.
Kit Pak 3	Couplers	Upper manual can be coupled to middle manual with all stops and special effects including piano, double-filter fixed stops of u/manual can be assigned to two tone generators.
Kit Pak 3	Special Effects	
	U/Manual	Solo/legato percussion.
	M/Manual	Repeat, contraccussion, tremolo, second voice, hand wah-wah, triggered autowah, free run autowah.
Kit Pak 11	Pre-Sets	Fixed stops, drawbars, 2nd harmonic, 3rd harmonic.
Kit Pak 12	Piano Voice	Piano, Celeste, Kinura, Honkytonk, Harpsichord, Banjo with the functions tremolo, echo and damper. Variable echo and tremolo speeds. Piano can be coupled to middle manual.
Kit Pak 1 + 10	Vibratos	Continuous frequency vibrato, delayed vibrato. WERSIVOICE rotating baffle effect with 2 speeds and 3 intensities. Drawbars, fixed stops, special effects, piano and pedal can be assigned separately to the WERSIVOICE.
Kit Pak 5	Reverb	Large spring unit with 3 programmable reverb degrees.
Kit Pak 14	WERSIMATIC Rhythm	24 rhythm patterns, 15 instruments, touch control and automatic, snare roll, drum break, pre-set and variable tempo, alternating rhythms. Stereo output.
Kit Pak 14	WERSIMATIC Accompaniment	Phantom accompaniment with or without memory for walking bass, low chords and arpeggiated high chords. Stereo output.
Kit Pak 10	String Orchestra	Built-in string orchestra using WERSIVOICE and string voices of both manuals and pedals. The 2 WERSIVOICES make string orchestra and rotating baffle sounds simultaneously available.
Kit Pak 5 + 6	Amplifiers	3 preamplifiers with active treble and bass controls. Manuals, special effects and WERSIVOICE assignable to left or right channel. Swell shoe with compensated loudness control.
	Tone Cabinets	2 Tone cabinets TL 5000, 200/400 Watts, with slave amplifiers.
Kit Pak 13	WERSIDATA Programming	40 programs on plug-in boards for both manuals and pedals. Programs have random access and are changeable.
Kit Pak 5 + 6	Interface	Connectors for tape record/playback, headphones, external tone cabinets and amplifiers.
Kit Pak 4	Finish	Brazilian Rosewood, locking lid.
	Dimensions	height: 47 1/4", width: 56 1/4", depth: 32 3/4"

WERSITONE Rotor Cabinets

Rotor Vibrato for Your Organ

Every organist knows the sound effects of rotating baffle/speaker tone cabinets whether imposing a fast vibrato or a slow cathedral effect. These tone cabinets emphasize the typical characteristics of electronic organs.

WERSI offers two „rotating” tone cabinets: WERSITONE 1000 and WERSITONE 3000. Both cabinets are equipped with a rotating wood baffle and a rotating twin horn. This ensures brilliant reproduction of bass and treble.

You have the choice of ordering either cabinet with hand- or foot-operated controls. If used with WERSI organs, we recommend the hand-control since corresponding provisions are built into every organ.

If you prefer to equip these tone cabinets with stationary speakers, order them with fixed woofer and tweeters. The rotating baffle effect, in this case, is obtained by a built-in or outboard WERSIVOICE.



The smaller tone cabinet WERSITONE 1000 is primarily intended for home use. Its contemporary design with its small dimensions will complement any decor. This cabinet has a 70 Watt woofer and a 50 Watt compression driver.



The large tone cabinet WERSITONE 3000 is designed for use on stage and in the church. It has a 100 Watt woofer and a 100 Watt compression driver. It may be equipped with an optional reverb.

WERSITONE 1000

Walnut cabinet with elegant grille cloth
Rotating twin horn WR 1000
Compression driver 50 Watts
WERSIROTOR WR 400
Woofer 50/70 Watts
Amplifier 70 Watts with tone controls
2 adjustable inputs
Dimensions: 24" wide x 31.5" high x 19" deep
Power: 220 VAC/50 Hz only
WERSITONE 1000 Rotor Cabinet*

Kit Order No. 550 Assembled Order No. 9550

* Assembly manual in German only

WERSITONE 3000

Walnut cabinet with elegant grille cloth
Rotating twin horn WR 1000
Compression driver 100 Watts
WERSIROTOR WR 600
Crescendo speaker 100 Watts
Amplifier 140 Watts with tone controls
2 adjustable inputs
Power: 220 VAC/50 Hz only
Dimensions: 28" wide x 39" high x 22.5" deep
WERSITONE 3000 Rotor Cabinet*

Kit Order No. 551 Assembled Order No. 9551

* Assembly manual in German only

WERSI Tower Speakers

WERSI achieved new dimensions in the radiation of organ sounds with the tower tone cabinets. Four high power broadband speakers are able to produce sufficient sound pressure for large auditoriums. The six piezo-ceramic tweeters, in connection with the treble diffusors, make for very transparent sound reproduction.

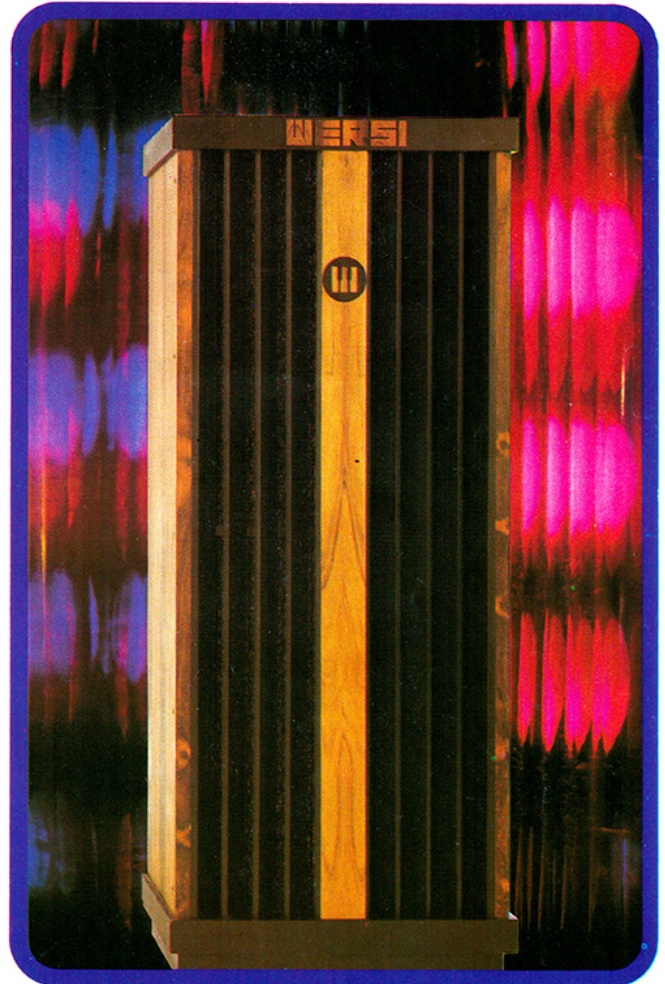
WERSI tower speakers are ideal radiators for permanent installations in church or concert hall.

Two models are available: The T5000 with a power handling capacity of 200 Watts and the T6000 with

400 Watts. The tone cabinets are finished standard in American black walnut.

Other finishes and indirect illumination are available, consult factory. The cabinets can be equipped with WERSI Slave Amplifiers.

For your home or for the smaller auditorium — a scaled-down version of our tower speakers. The same brilliance and sound transparency at half the power (100 watts) and reduced dimensions. The T 4000, a new standard in speaker design.



Tower Speaker T 5000

Kit Order No. 552 Assembled Order No. 9552

Tower Speaker T 4000

Kit Order No. 554 Assembled Order No. 9554

Tower Speaker T 6000

Kit Order No. 553 Assembled Order No. 9553

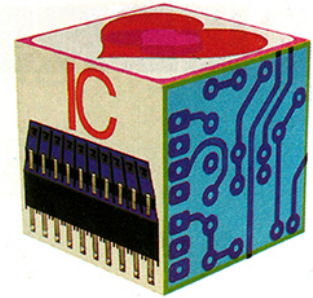
Slave Amplifier 140 Watts

Kit Order No. 411 Assembled Order No. 9411

Kit Pak

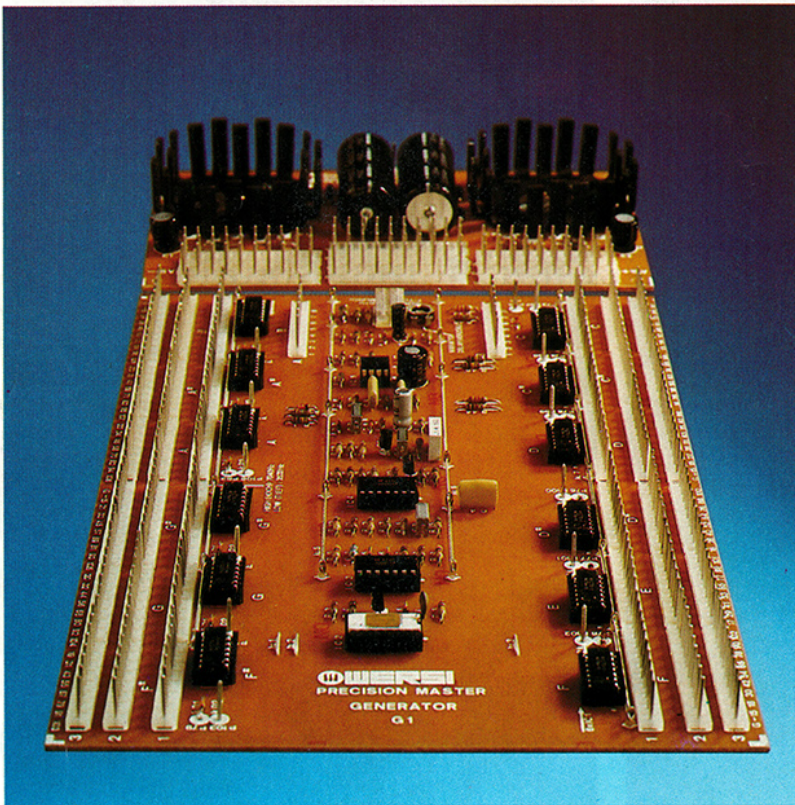
Power Supply,
IC-stabilized,
Precision Master Generator,
Vibrato, Delayed Vibrato,
Hawaii-Effect,
Slalom, Slalomatic,
Pitch Control, Transposer,
fully pluggable

1



Kit Pak 1

Order No. 001

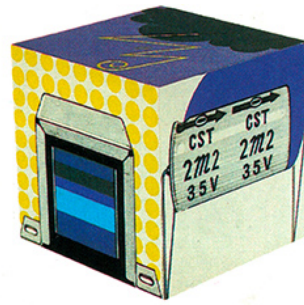
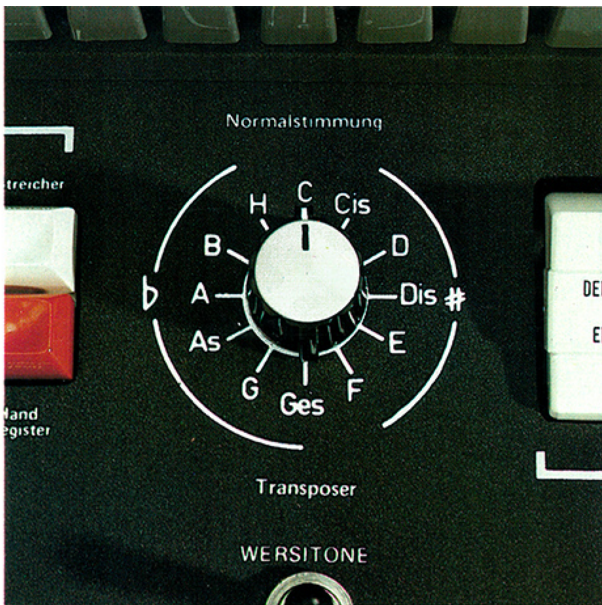


The new Precision Master Oscillator and the electronically stabilized Power Supply.

WERSI always was a leader in the design of tone generators. Even the first generator, RG 869, was IC-equipped. The next generator, the DT 74, was based on MOS-LSI technology. Now WERSI presents the new PRECISION MASTER GENERATOR G 1. The new tone generator represents another of WERSI's achievements. Of course, it utilizes MOS-LSI technology throughout. All frequencies produced depend on

a single master oscillator. The 12 frequencies of the highest octave are derived in an LSI circuit called the top-octave-synthesizer (TOS). All other lower tones are generated subsequently in divide-by-two IC's. The master oscillator is incorporated in a tightly regulated feedback loop. Other generator functions like vibrato and slalomatic influence the gain element of the loop. The arrangement is called a voltage-controlled oscillator or more commonly a VCO.

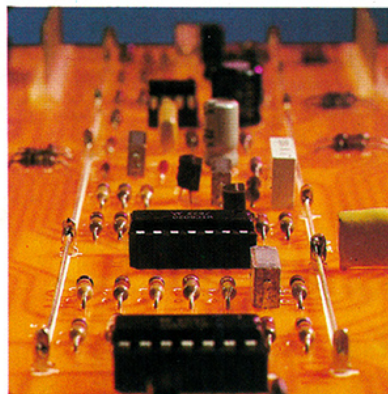
The generator outputs are normally „silent”. A tone is delivered only when a key is depressed. If you already have owned an organ you know what that means. With most organs all tones are continuously fed to the extensive wiring resulting in cross-talk. This is called „sing-through”. It cannot happen with the new WERSI generator. The output waveform of our generator is a square wave. This raw signal is switched by the electronic keyers. After the keyers the square wave is either used directly as an input to some formant filters, combined by staircasing for formant filters requiring sawtooth inputs or filtered to sine waves for the drawbars. A rectangular waveform with a 3 : 1 on/off ratio is produced directly at a second set of generator terminals. This pulsed waveform is used for the piano. We have four different basic wave forms available simultaneously. By connecting our transposer kit the generator can be tuned to suit any key of an entire octave. It can



The WERSI Organs can transpose a tune into every desired key.

be switched up 5 half-tones to F from standard pitch (C) and down 6 half-tones to F.

The assembly of the generator is easy. All IC's are supplied with sockets. The other components are simply inserted into the board and soldered. You will appreciate the easy-to-oversee layout so familiar with the WERSI products. The master oscillator is tuned by means of stable Cermet trimpots. All tones are automatically locked to the oscillator. The organ tones can never be out of tune with each other.



MOS LSI-Technology in the Precision Master Oscillator the heart of the WERSI-organ

Generator Functions

The new WERSI tone generator has a basic tone range of 8 octaves. Count the slalom control and you have 9 octaves. Do not forget the transposer which adds another octave for a grand total of 10. Standard functions are the Hawaii-effect, vibrato (speed and intensity adjustable), delayed vibrato with adjustable delay, transposer, slalom and slalomatic as well as the master pitch control. All functions of the WERSI tone generator are programmable. When programmed these functions are available from memory like the functions of all other building blocks of the new WERSI organ kit system.

Slalom and Slalomatic

The slalom slide control on the left endblock continuously tunes the generator over an octave. The slalomatic feature does the same thing automatically. When a key is depressed it slews up or down at your desired speed. The slew range spans an octave or less depending on the slalom control setting.

Output Connectors

All 96 tones are fed to 3 parallel rows of connector pins. Each of the outboard pins has a number assigned which corresponds to the frequency number. The entire musical scale is numbered sequentially, starting with the #13 for the lowest C (C₀) and ending with the #108 for the highest B (B₇). The output connector pins will receive the daughter boards as part of the keying system (Kit Pak 2).

Power Supply

Our new twin-voltage power supply has fewer parts than this paragraph has words. This little giant is IC-stabilised, short circuit-proof and packs thermal overload protection. The large array of connector pins will be used for the distribution of power to all building blocks of the organ except the power amplifier chassis.

The Power Transformer is included in this Kit Pak. Later it will become part of the power amplifier chassis (Kit Pak 6).

Kit Pak

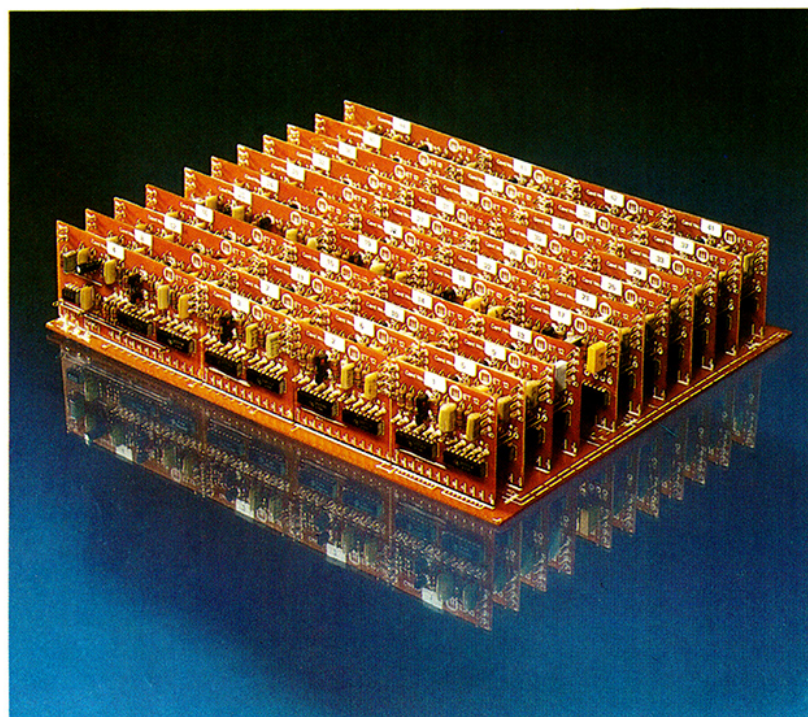
Electronic Keying with
Envelope Control for
Immediate and Soft Attack.
Three Sustains for
all Footages.
Drawbar System
Printed Matrix
Wiring Harnesses

2



Kit Pak 2

Order No. 002



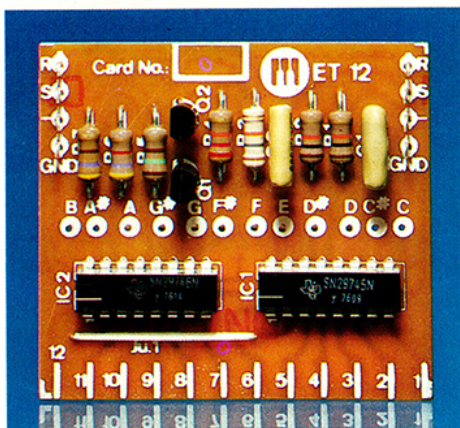
Fully integrated keying eliminates mechanical contacts.

The electronic keying, contained in this Kit Pak, represents a major step into the future of electronic organ kits. Many organ brands still use multiple mechanical key switching.

The keyer has the responsibility of transmitting the generator signals to the tone forming circuits whenever a key is depressed. Depending on the number of footages a dozen or possibly more contacts are required per key. This means that approx. 800 to over 2,000 contacts are needed in an organ.

WERSI replaced the mechanical contacts with electronic switches. These electronic switches are contained in integrated circuits. They have no moving parts. A single contact per key controls any number of these switches. The contact controls a DC command voltage and no audio signal. WERSI's electronic keyers are designed for single pole make only action ensuring trouble free operation.

The IC for the electronic keying is a WERSI in-house development. It is being manufactured in PL technology by one of the largest semiconductor companies, Texas Instruments. This IC does away with contact problems. The keyer circuits also contain the sine wave forming for all footages. All outputs are taken from low-impedance operational amplifiers.

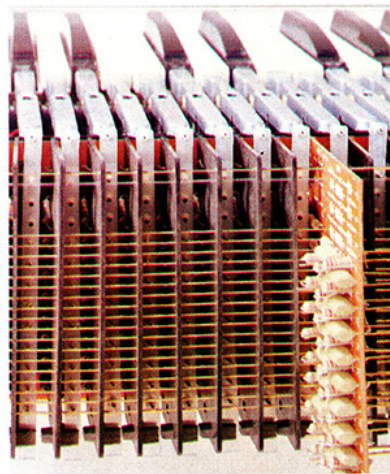
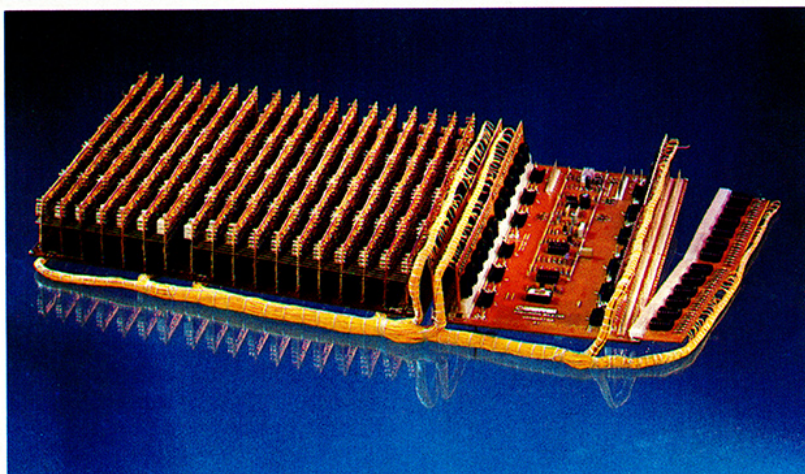


The IC for the electronic keying is a WERSI in-house development. This IC does away with contact problems.

Electronic Keyers,
Precision Master Oscillator
and Wiring Harness
for the HELIOS.
New integrated
electronic keying

12 or more key contacts were
required yesterday, today it is modern
IC technology. These two pictures
illustrate the progress.

Traditional mechanical
key contacts



WERSI's electronic keying actually takes place in two locations. In the inactive state, electronic gates at the generator outputs prevent any signals from reaching the wiring and the keyers are off. When a key is depressed the corresponding generator gates are requested to pass only the signals required. All other signal-distributing wires remain inactive. This results in very clean tones while you play and virtual silence otherwise. Several years of research and development preceded the introduction of this keying system. Besides the desired soft attack the keying envelope must provide instantaneous response to the depression of a key. WERSI

puts much emphasis on the fast attack which is so important for some solo voices and drawbar registrations. The technical realization of the variable attack feature led to a patent application.

WERSI's electronic keying offers you a number of advantages: High reliability, choice of fast or soft attack and short/medium/long sustain. The organ can be played polyphonically with sustain in all footages and with all stops. A WERSI organ, even when equipped at the lowest option level, has a multitude of musical expressions usually found in instruments costing much more.

The assembly of the electronic keyers is simple. Resistors,

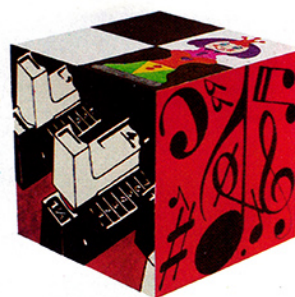
capacitors and IC's are installed on small plug-in boards. These boards, in turn, are soldered to the printed matrix. The wiring is accomplished by connecting the ready-made harnesses.

The integration of electronic keying makes it possible to provide sophisticated circuitry at reasonable cost. The keyers combine the fast attack property of mechanical contacts with the flexible envelope control of solid-state switching.

Kit Pak 2 also contains the sine wave forming and the drawbar assemblies. In connection with Kit Pak 1 you now have the basic electronics needed to make up a drawbar organ.

Kit Pak

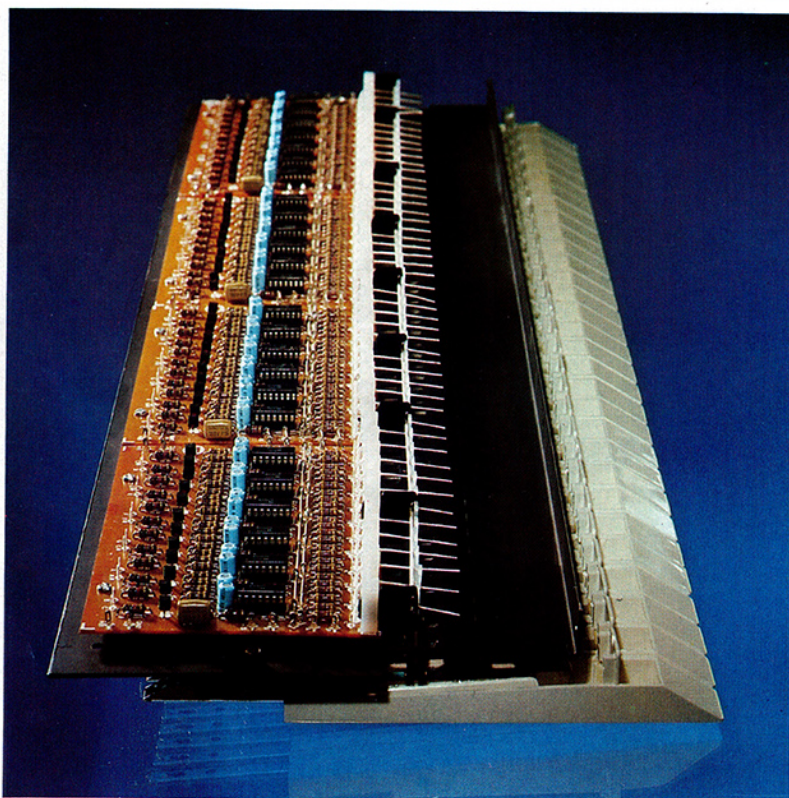
3



Pre-Assembled Manuals,
Envelope Control With Quick
and Soft Attack,
Three Sustain,
Sine Wave Drawbars,
Wiring Harnesses

Kit Pak 3

Order No. 003



A single contact controls the Electronic Keyers with Fast or Soft Attack and Three Sustain Levels.

This Kit Pak contains the envelope control with the key contacts. The envelope control boards will be mounted directly to the underside of the manuals. The key contacts are included on the circuit boards enabling an easy and fast assembly. The contact is a self-cleaning spiral spring.

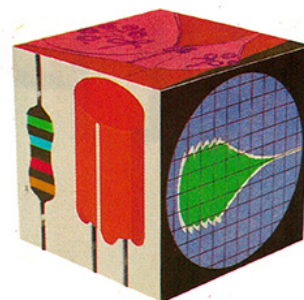
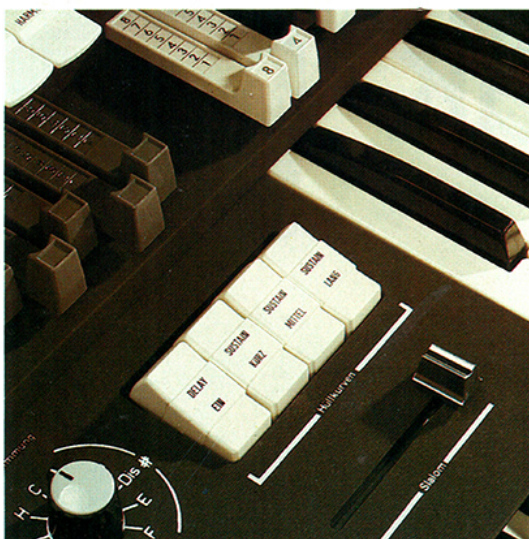
Depending on the selected mode, the envelope circuitry controls the electronic keying either with direct

tone attack, soft attack and short, medium or long sustain. This envelope control is an important prerequisite, together with WERSI-VOICE, for the incorporation of the STRING ORCHESTRA into all WERSI organs. The circuits are built with modern IC's. The medium sustain can be adjusted by a trimpot to suit your personal taste.

Combining Kit Paks 1 through 3 you own all necessary electronics which are necessary to form a basic organ. It would be capable of playing drawbar settings. Only the rotating baffle effect of WERSI-VOICE is missing. Adding the fixed stops you could play all the bright solo voices including the entire string choir. WERSI's smallest spinet is equipped with envelope control in the upper manual while it is optional equipment for the lower manual. All other models have standard envelope control in all manuals. The soft attack feature is especially valuable for classical and liturgical music. It simulates the natural sound build-up of pipes. The tones appear with a slight time delay and start softly. This makes WERSI's organs perfectly suited for classical and liturgical interpretations.

The sound of a real sine wave drawbar system excites every musician. Why all the emphasis on „real“? Often you find organs equipped with drawbars but they lack the purity of true sine waves. To generate sine wave signals spanning the entire manual and all

Each WERSI Organ has
Fast and Soft Attack in
all Footages.

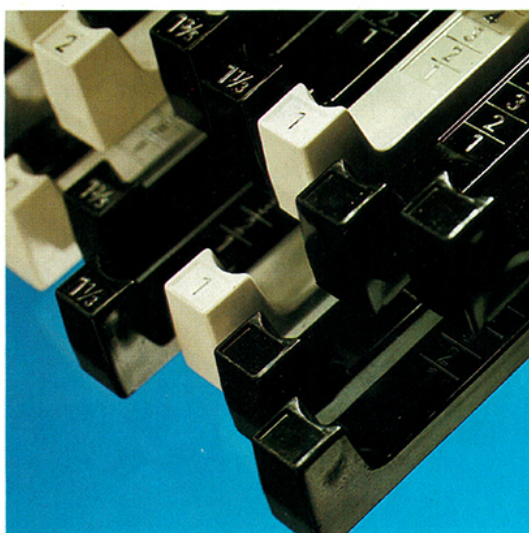


footages a sine wave tone generator or chained filtering of square wave signals can be used. One single filter cannot handle the combined output of an entire manual. If a sine wave generator is used bright wave fixed stops are difficult if not impossible to obtain.

In connection with WERSI's new precision master generator, the electronic keying, the staircase combiners and the drawbar system we have sine wave (cascaded filtering), square wave and sawtooth wave forms available simultaneously.

WERSIVOICE is equally important as is the correct waveform for that familiar drawbar sound coming from the rotating baffle. We have the drawbars and WERSIVOICE. Plus all square and sawtooth wave voices as well as numerous special effects. Many professionals have recognized these facts.

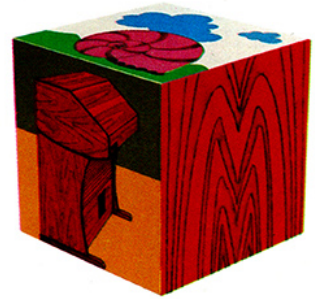
You may look at the drawbar system as a complete pre-set registration for each manual. If you switch a WERSI organ from drawbars to fixed stops you hear the sound characteristics of two different worlds. You can even combine the two systems, add the piano and a large variety of special effects. After the completion of this Kit Pak and the addition of a suitable amplifier system you already have a very versatile organ. The drawbar system is an integral part of the system, not an after-thought. WERSI has cast its organ concept in this light.



Real Sine Wave Sound
with the WERSI Drawbar
System.

Kit Pak

4



Cabinet With Selected Veneers,
Hinged Stop- and Keyboards,
Steel Control Panel,
Bench

Kit Pak 4
Order No. 004



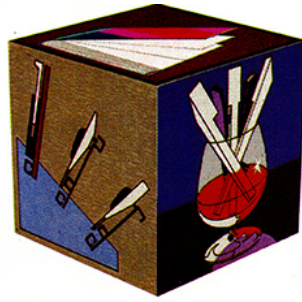
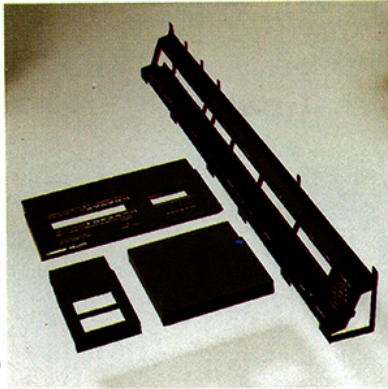
Completely finished Cabinets in selected veneers for all WERSI Organs.



A WERSI Organ easy to assemble – a fascinating Do-it-Yourself project.



Novel Hinge System for manuals and stop board. Patent pending.



Benches to match every organ model, some with hinged top, upholstered surface or height-adjustable.

WERSI has outfitted its new line of organs with redesigned cabinets. They are mechanically stable and are equipped with a novel hinge system for stop- and keyboards. The mechanical system has led to the application of a patent. It enables the kit builder to assemble the playing table accurately. The cabinets and all panels have the cutouts for the highest option level.

Should you elect to limit the equipment of your organ to option level 1 or 2 you may want to order the missing stop tablets ahead of

time for optical completion. Another possibility: You devise bezels to cover the unused openings. The mechanical assembly is easily accomplished and does not require any special tools. The new WERSI hinge system allows the access to all building blocks during the assembly as well as after the completion of your project.

WERSI manufactures all cabinets in its own cabinet making facility. There is an extensive array of hand-selected veneers available. American black walnut is supplied

standard. For a premium you can order other veneers such as Brazilian Rosewood, Teak and light or dark Oak, for prices see price list. Consult factory for availability. The portable model Orion W1T comes in a vinyl-clad cabinet. The portable Helios W2T is finished in wood and sits on a chrome plated frame.

The front panel is a pre-fabricated and contoured steel frame. This ensures an accurate fitting of the stop switches and control elements. All surfaces of the playing table are finished with a scratch-resistant velvet-like coating.

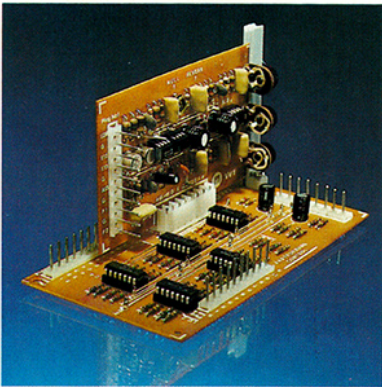
Kit Pak

5

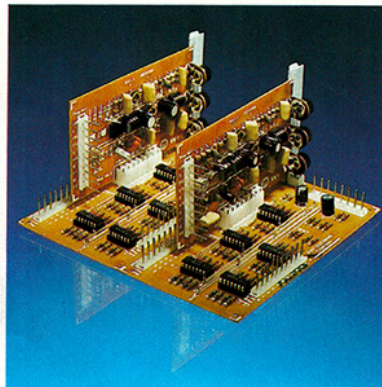


Mono Preamp with Reverb,
Bass, Treble and Loudness Control,
Stereo Preamp with Reverb,
Bass, Treble and Loudness Control,
Main Wiring Harness with Connectors

Kit Pak 5
Order No. 005



Mono Preamp with Reverb,
active Tone Control and
compensated Loudness Control.



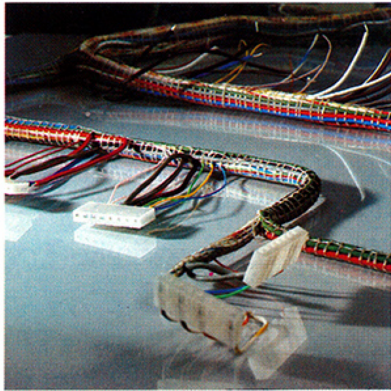
Stereo Preamp with Reverb,
active Tone Controls and
compensated Loudness Control.

The assembly of the electronic subunits is easy. You take the components from the bags, install them into the circuit boards and solder their leads. We know from experience that most mistakes are made when wiring the entire organ. You must watch where the wires go, you have to avoid cross-talk by proper routing and the grounding of subunits requires special attention.

WERSI always supplied harnesses for the wiring between the generator and the key switching. When designing the concept of the new line of organs WERSI decided to include a comprehensive wiring harness which accomplishes the interconnections of all building blocks for the highest option level. You merely attach the connectors to the wire ends, fasten the harness to the cabinet and plug in the connectors – your organ wiring is done.

The assignment of harness wires is made clear through color coding. Each wire exits from the harness exactly at the location where it will be connected. Unused branches for future options are simply left alone. Even an incompletely equipped organ is operational.

Let's illustrate the assembly of a WERSI organ: Subunits are assembled, checked and mounted in the cabinet according to the detailed kit- and organ assembly manuals. Then the small wiring harnesses are installed and finally the main harness. All connectors



Close-up view of the Main Wiring Harness.



WERSI Wiring Harnesses eliminate wiring errors for the do-it-yourself organ builder.



are plugged in. Now the organ, you built yourself, will sound exactly the same as one of our factory-produced models. The system is designed for the non-expert builder.

The new preamps of WERSI's organs make use of operational amplifiers for low-distortion mixing and amplification. Kit Pak 5 contains a single-channel preamp for the Orion models. For all other models twin-channel pre-amps are supplied. The preamp has electronically switched audio inputs and the summation of the incoming signals. The remote controlled channel selectors enable the distribution of the individual sound sources from within

the organ to left and right channels. The operational amplifiers sit on the plug-in daughter board. They provide signal amplification and active treble and bass controls.

With twin-channel preamps a single reverb channel is normally used with an externally mounted spring unit. Provisions have been made for the addition of a second reverb channel. The low-impedance output of the preamp – level adjustable – is fed to the power chassis and the jack marked „Ext. Amplifier”.

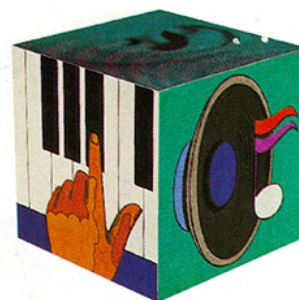
The swell shoe has an LDR (light-dependent resistor) volume control. The associated amplifier stage on the preamp has pro-

visions for base and treble boost at low volume settings. This is called a physiological loudness control.

Additional in- and outputs on the preamp are designed for recording and playback purposes. The corresponding connectors, together with an ear-phone jack, are mounted under the playing shelf.

Kit Pak

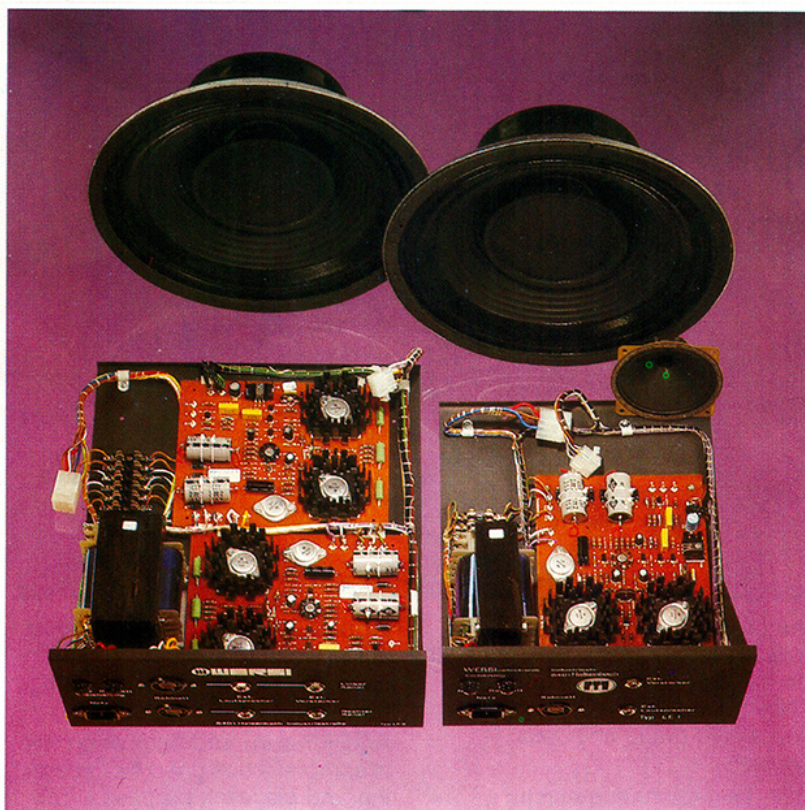
6



Lower Wiring Harness,
Power Amplifier Chassis
70 Watts or 2 × 70 Watts,
Heavy-Duty Speakers
and Tweeters

Kit Pak 6

Order No. 006



High performance Power Amplifiers
and Speakers.

The sound of an organ can only be as good as the weakest member of its building blocks. We designed matched amplifier systems for our organs.

This Kit Pak contains the power amplifier – monaural for the model „Orion” and stereophonic for all other models.

The power chassis is a right-angled steel frame. It contains one or two power amplifiers and the power transformer. The rear panel of the chassis serves as interface for the outside world. Here you will find the AC power input, the primary fuses and jacks for external speakers and external tone cabinets. WERSI's reliable 70 Watt power amplifiers provide ample power for home use even if you like to play with the windows shaking. Special organ speakers and tweeters radiate the sound. The power chassis is easy to build. The circuit board(s) is to be assembled and mounted. A ready-made wiring harness is used for all inter-chassis hook-ups and terminates in two connectors.

Kit Pak 6 also contains the complete wiring harness for the organ base. It connects the power chassis, the speakers and the swell shoe to the top half of the organ's cabinet. It is simply fastened in place and connected – now the organ's lower half is fully operational.

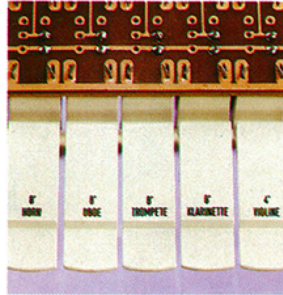
The 6-pole receptacles at the rear of the power chassis provide AC power, low impedance audio and a switched control wire for external tone cabinets.

Kit Pak

7



Engraved
Stop Tablets.



Formant Filters for All Solo- and Pipe Registers, Stop Switches as well as the Master Control Center for All Volume and Time Functions

Kit Pak 7

Order No. 007



Brilliant Fixed Stops and Solo Voices for all WERSI Organs.

WERSI developed its own stop switch for the new line of organs. The switches are mounted directly on the respective circuit boards eliminating all wiring between switches and circuits. They have self-cleaning wipe action contacts. The top row of stops are tongue tabs while all others are rocker tabs.

Like all other subunits, the fixed stop filter assemblies are fully pluggable. They contain the saw-tooth combiners and the filters for the individual stops. Each stop filter is on its own daughter board with optional edge connector. The filters are gated on and off electronically such that their functions can be incorporated into the WERSIDATA programming.

The solo stops were expanded and now encompass new sound colors. Each filter system includes string stops producing, with WERSIVOICE, the beautiful voices of a string choir. Brilliant solo stops include clarinet, trumpet, oboe, trombone, saxophone, horns and flutes. Some of the more complex formant characteristics are achieved with the help of active filters.

Channel assignment tabs are located beside the stop tabs, allowing the selective routing of fixed stops and drawbars to the WERSIVOICE. The pre-selector switch „Drawbars/Fixed Stops“ enables fast changing from a drawbar registration to a

combination of fixed stop voices at the depression of a single tab.

The envelope controlled electronic keying of the WERSI organs represents a valuable asset to the fixed stop voices. Wind instruments can be reproduced with their natural soft sound build-up. Every key has its own envelope control so that every note appears with the same soft attack whether you are playing in a staccato or legato mode. This is not to be confused with the special effect „Contracussion“ which you find in all WERSI organs. The contracussion softens the attack only for the first note of a legato sequence.

The sustain feature gives completely new characteristics to some of the fixed stops as well as the drawbars. It makes it possible to simulate bells, a vibraharp and a music box. Sustain is also indispensable for the string voices. Each WERSI organ has at least a 16' Cello, an 8' Viola and a 4' Violin. These voices can be selectively played as solo stops or as ensembles of strings when used with WERSIVOICE.

After the inclusion of the fixed stops you are in a position to play the entire range of classical and liturgical music on the manuals of your organ. Besides the voices of the classical organ the soft attack characteristic of pipes is there too. Having built in Kit Pak 7 you have an organ which is capable of giving you a wide variety of sounds.

Kit Pak

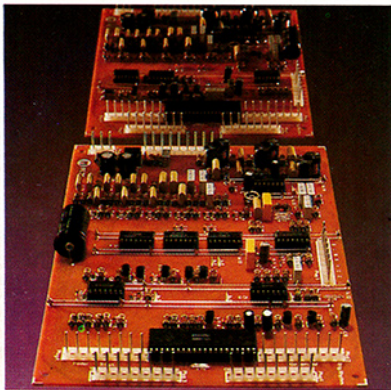
8



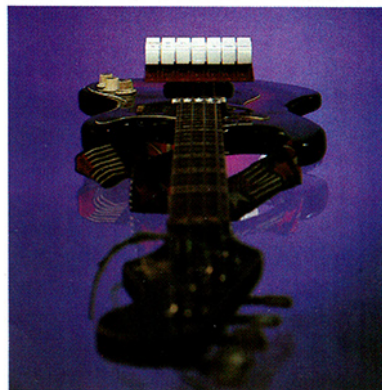
13 to 30 Pedal Clavier,
Pedalsustain With 6 Footages,
With Drawbars, Tuba
Trumpet and Bass Guitar

Kit Pak 8

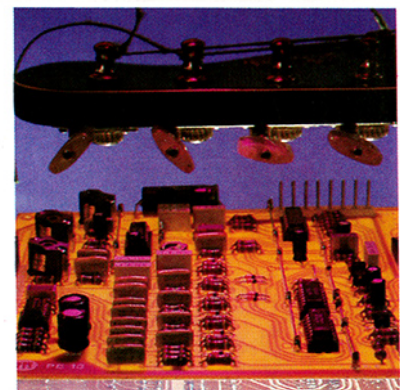
Order No. 008



Pedal Electronics for 13 and 30 Pedals.



The Sensation.



A true-to-life Bass Guitar.

Even the smallest WERSI organ, the Orion, has several pedal footages. The larger entertainment models have up to 6, the church organ Classica has 8 footages. The pedal electronics utilizes state-of-the-art circuitry. The pedal sustain feature possesses low-note-select with mutual interlocking. The pedal voices are derived using footages from 16' to 1/2' available on selected drawbars. Fixed stops include trumpet, tuba, trombone, stringbass and a real good bass guitar. Each group of voices has its own envelope control. Here is an example: You can play a drawbar combination with sustain, add a tuba without sustain and complement with a bass guitar with its own complex envelope. All the bass pedal voices are simultaneously available.

The pedal drawbars alone are very versatile since they range from 16' to 1/2'. The associated envelope controls are: no sustain, short and long sustains.

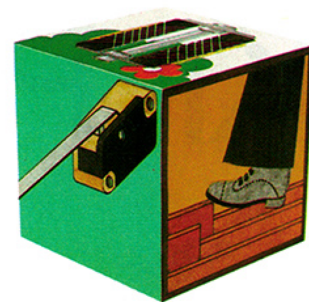
The fixed voices of trumpet, tuba and string bass have the soft attack feature characterizing the actual instruments. The string bass, for example, is the third voice making up an entire string orchestra (lower manual set to string choir, upper manual set to solo violin).

WERSI's bass guitar has a truly astonishing sound. First, you hear the pluck of the pick, followed by the sustained sound of the instrument. Depending on your playing technique, a "plucked" guitar string will sound damped short or with sustain. By the way, WERSI has extracted the bass guitar, along with other voices, and has designed them into a self-contained bass synthesizer.

The pedal electronics with sustain is supplied for 13 or 30 pedals. The console models use the 30 pedal version for full masterpiece playing. The WERSI pedals offer everything from bells to blasting tuba, from string bass to the disco bass guitar.

Kit Pak

9



Standard Church Organ Pedal,
Electronic Pedal Keying
Pedal Voicing

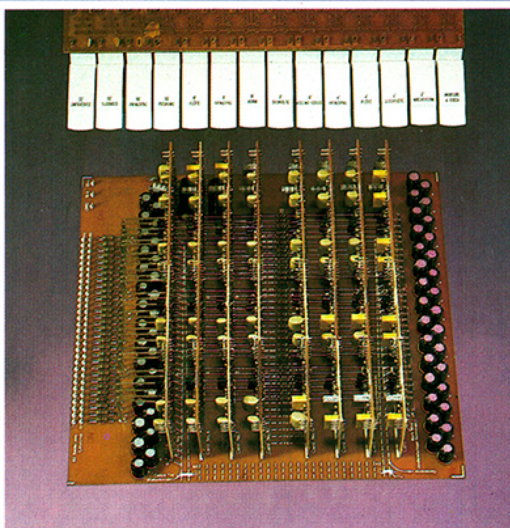
Kit Pak 9

Order No. 009

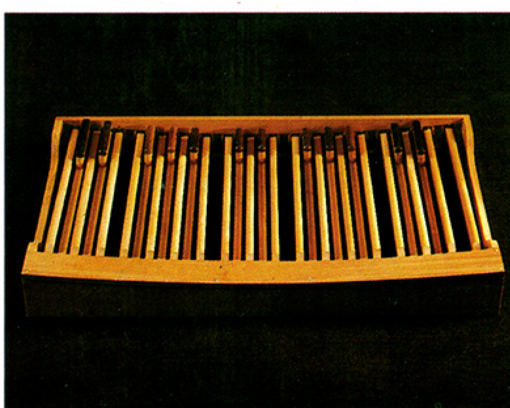
The WERSI CLASSICA –
an instrument you must listen to.

Kit Pak 9 contains the pedal clavier and associated electronics for the „Classica“ W3 SK. It is a 30 pedal church organ clavier which can be played polyphonically. The pedals themselves are supplied fully assembled. The single contact per pedal is a sealed microswitch guaranteeing trouble-free operation over millions of cycles. Like the manuals, these pedals have electronic keying and have 8 footages. The envelope electronics includes the soft attack feature. The formant filters with its stop switches are also included in Kit Pak 9. The pedal disposition ranges from 32' Untersatz over 16' Trombone, 8' Stringbass up to Mixture 4-fold. These pedals are perfectly matched to our „Classica“ organ.

They help make the „Classica“ the ideal instrument for classical music interpretations, be it a Fugue from Bach or an entire Symphony from Beethoven. The serious organist appreciates the rich array of features which include the modern equivalent of the Combination Action, namely the WERSIDATA Registration Memory. You must hear the „Classica“ to appreciate its potentials.



Electronic Keyers with Soft Attack for the Fixed Stops of the CLASSICA.



Church Organ Pedals.

Pedal Disposition

Untersatz	32'
Subbass	16'
Principal	16'
Trombone	16'
Bassflute	8'
Principal	8'
Krummhorn	8'
Trompet	8'
Violoncello	8'
Principal	4'
Flute	4'
Clarion	4'
Nachthorn	4'
Mixture IV	

Pedal Footages

16', 10-2/3', 8', 4', 2', 1-1/3', 1', 1/2'

Kit Pak

10

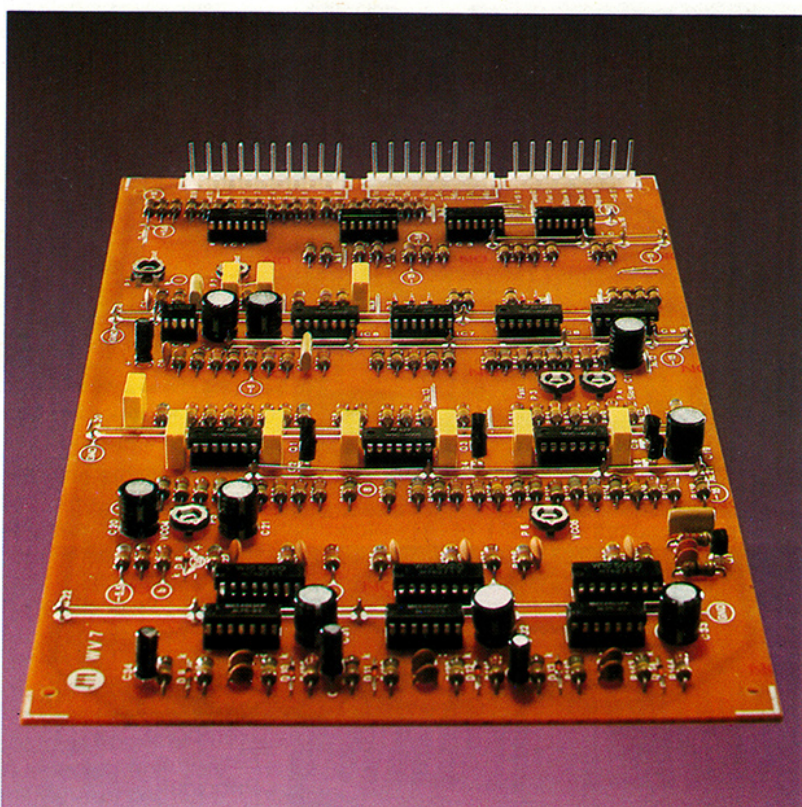


WERSIVOICE

Rotating Baffle Sound,
String Choir,
The New Sensation

Kit Pak 10

Order No. 010



WERSIVOICE Rotor Sound – String Choir,
a unit being well received by the experts.

WERSIVOICE is two machines in one. For one, it works like a rotating baffle and for the other, it „multiplies” the incoming voice into a choir of voices.

WERSIVOICE in the WHIRL mode adds the most sophisticated vibrato to your organ. It creates the typical and well-known rotating baffle sound giving your organ the splendid fullness which is so ear-pleasingly familiar. WERSIVOICE runs at fast and chorale speeds. But more yet – the intensity of the effect can be varied to suit with no mechanical rattles or squeaks. There are no moving parts.

Recording is finally simplified by the absence of formerly needed microphones. Late-night home organists benefit too since they can hear the „rotating baffle” through their earphones.

Acoustic power no longer depends on the power handling limitations of mechanical rotor cabinets. The pro artists can easily get any required sound level through high power stationary speakers.



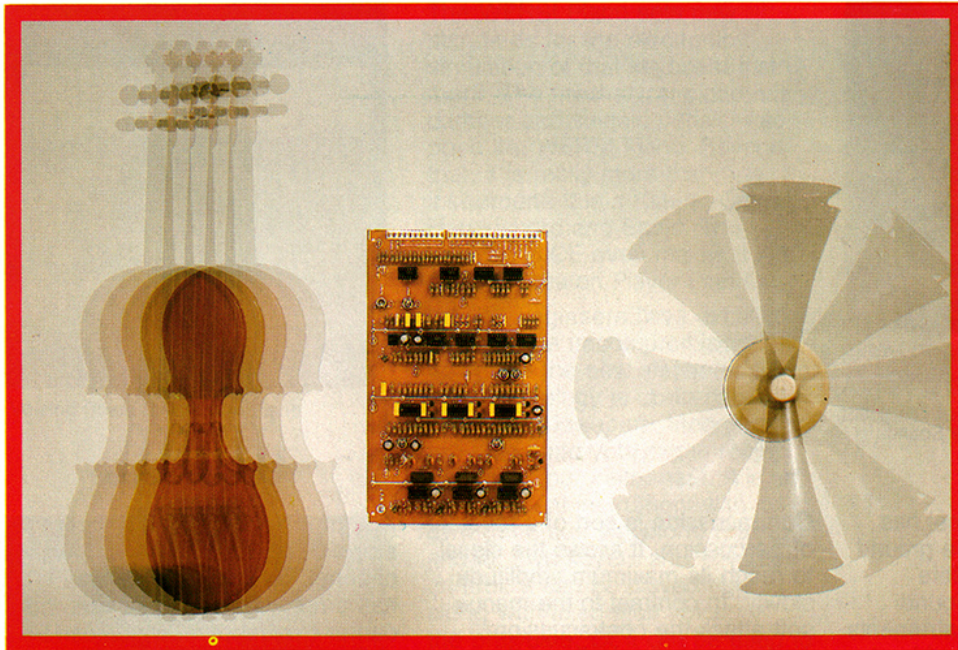
Notes regarding musical functions:

- Rotating Baffle Sound Fast/Chorale
- Speed Change Fast/Inertial
- Fading Effect
- Choir Mode
- Wide Frequency Response
- Sound Source Selectors

Notes regarding applied technology:

- All Rotor and Choir Effects
- On One Circuit Board
- Bucket Brigade Delay Lines
- LSI Technology
- Operational Amplifiers
- Programmable Functions

Klaus Wunderlich loves the sound of the new WERSI Organs. He is especially dedicated to the WERSIVOICE.



WERSIVOICE in the CHOIR mode acts as an electronic „multiplier“. That means an incoming solo voice appears at the output as being „multiplied“, as an ensemble or choir of voices. Together with the organ's electronic keying and the controlled envelope you are able to create complete orchestral string sounds or the simulation of a brass section.

Whirl functions include fast/chorale speeds, three degrees of intensity and, in analogy to its mechanical counterparts, the speed change is optionally instantaneous or „inertial“.

In the choir mode the intensity of the effect can be varied from subtle to very intense for „fading“ seemingly coming from outer space.

This multitude of functions is concentrated on a single circuit board. Along with the sound source selectors all functions are programmable by the WERSIDATA registration memory.

The WERSIVOICE is designed in integrated technology using, among others, analog shift registers (bucket brigades). It has quickly received wide recognition from professional musicians all over the world.

This WERSIVOICE is especially designed for the use in WERSI organs. If you want to add the Rotor Sound or String Choir to another organ make please refer to the self-contained WERSIVOICE shown on page 93.

Kit Pak

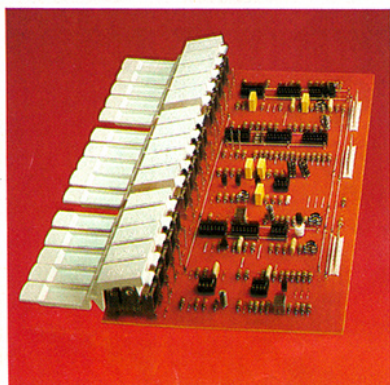
11



Special Effects With Percussion,
Contracussion, Repeat,
Tremolo, Second Voice,
Solo/Legato Percussion,
Wah Wah and Auto Wah
Wah Wah Free Run
Vibraharp, Xylophone,
Synthesizer Effects

Kit Pak 11

Order No. 011



All Special Effects from Percussion to Synthesizer-Like Sounds on a single Circuit Board.

The special effects channel has been redesigned from the ground up. It now offers a complete assortment of functions found fractionally in the better instruments throughout the world. Combined on a single board are the circuits for percussion, repeat percussion, tremolo, second voice, contraccussion, manual and automatic wah-wah.

Percussion is still one of the most sought after effects in an organ. Our percussion can be played in either legato or solo mode. In the legato mode the percussive modulation is recurrent with the depression of a key regardless whether previously depressed keys are being held down. In the solo mode the percussion responds only to the first key's depression. Repeat percussion triggers the percussive envelope successively.

Contraccussion is sort of a reversal of percussion. It allows the signal to reach its maximum amplitude slowly. In contrast to the manuals' soft attack the contraccussion works monophonically on the composite signal only. Every WERSI organ has both soft attack and contraccussion.

A set of channel select tabs is used to assign one or more of four sound sources (fixed stops, drawbars, second harmonic and third harmonic) to these above mentioned special effects channels. Depressing the „Second Voice” tabs cancels all these functions and allows the chosen signal(s) to be passed on as an unmodified voice(s).

Any of the upper manual fixed stops can be fed to the wah-wah channel. The wah-wah channel has a narrow band-pass filter the center frequency of which can be shifted back and forth across the audio spectrum. It can be controlled by hand or automatically. The auto wah allows the band-pass to move up or down triggered by the upper manual. In the free run mode the wah-wah continuously travels up and down the frequency range. The wah-wah channel output may be operated on by the other special effects if so desired.

All special effects are programmable with the WERSIDATA registration memory.

Having added Kit Pak 10 to your instrument it is no longer just an organ but has acquired many features usually associated with so-called synthesizers.

Kit Pak

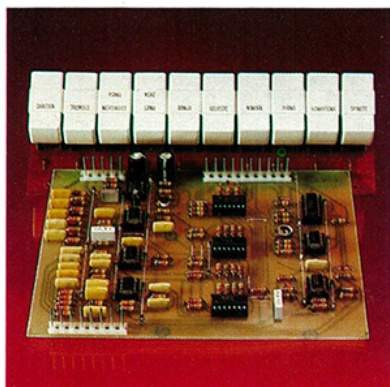
12



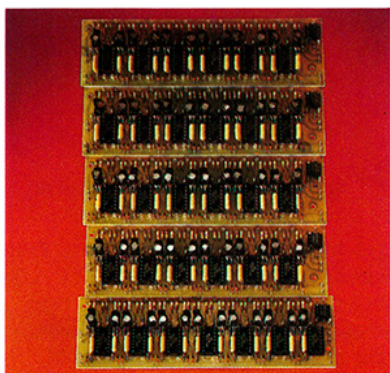
Piano with
Celeste, Kinura, Honkytonk,
Harpichord, Banjo and the
Functions Damper, Sustain,
Echo, Tremolo and
Player Piano with WERSIVOICE

Kit Pak 12

Order No. 012



Voicing Board for the new Piano.



Modern IC-technology of the
WERSI Piano.

The WERSI Piano sets new standards for the electronic simulation of that keyboard instrument. The mechanical piano has damper and sustain pedals – so does the WERSI Piano. Beyond that, it is really more than one instrument. It is a Kinura, Celeste, Harpichord and Banjo. The WERSIVOICE even makes it into an aged beaten Player Piano.

WERSI engineers have excelled again in the uncompromising design of the new electronic piano. The technology is up-to-date and the voicing is superb. Incorporating the piano into your organ really enriches your instrument. It is an independent instrument with its own generator waveform (pulsed) and its own keyers and envelope control. It can be played right along with fixed stop voices or the drawbars. Or it can be used to set matching counterpoint to a string choir.

The piano has its own tremolo modulator and a repetitive striking of the „hammers”, called echo.

The keyer and envelope shaper circuit boards are mounted under the upper manual. The supplied cable harness connects these boards to the generator.

A separately mounted circuit board contains the different voicing filters and auxiliary functions. The main wiring harness already has provisions to accommodate the piano circuitry.

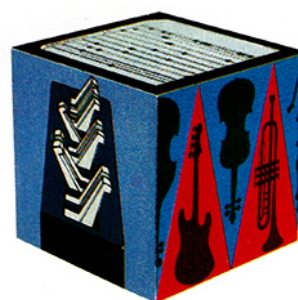
All piano modes and functions are programmable with the WERSI-DATA registration memory.

The models „Classica” and „Galaxy” have inter-manual couplers allowing you to play the piano on the lower manual.

A new glissando/arpeggio kit will be introduced during the year 1977.

Kit Pak

13

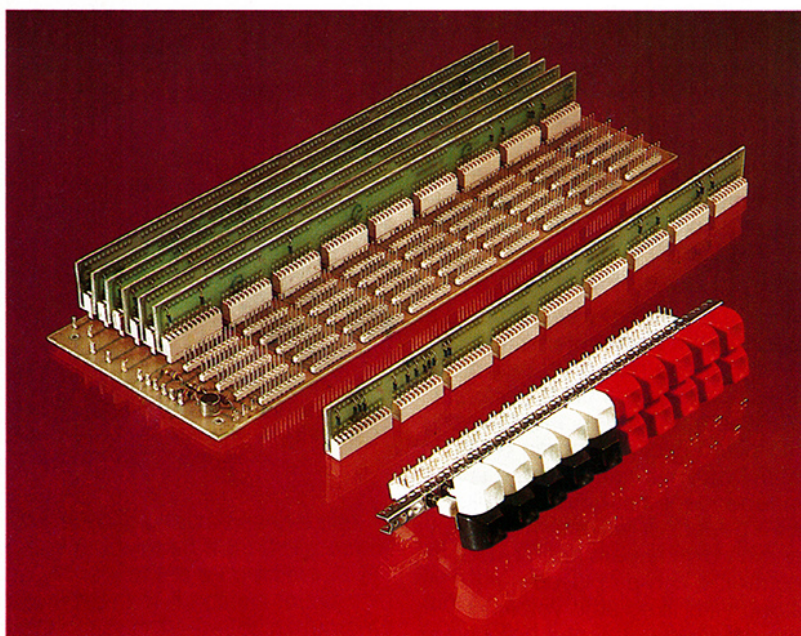


WERSIDATA

Program Memory for Registration
A Computer in Every
WERSI Organ

Kit Pak 13

Order No. 013



WERSIDATA, a computer for memorizing all registrations, addressable at the touch of a button.

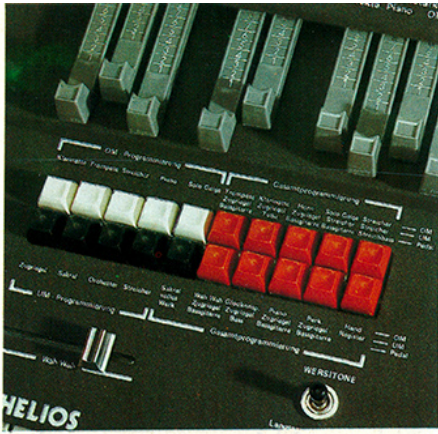
The programmability of WERSI's organs represents a step into a new organ era. An organ that has many features and voices also requires many control elements. The player can get lost easily changing the registration from one sound to another because it is not always possible by means of a single tab. For example, if you want to replace a liturgical registration with a drawbar sound and percussion you must flip 20 to 30 tabs. Nobody can perform so many changes quickly.

This argument played a major role during the system development phase of the new generation of organs. All subunits in a WERSI organ are equipped with electronic gates and/or switches. They merely receive DC commands stemming from the tabs. These DC commands can originate from another source like the electronic registration memory.

The WERSI organ possesses between 10 and 30 programs, depending on the model. They consist of small plug-in boards which sit on a master board. They are thus exchangeable. You only have to determine which registration you want to associate with a particular program card. WERSI offers a number of standard programs. It is, however, up to you as the ultimate organ builder to adapt the programming to your personal taste. The task is as simple as installing a small diode for every stop you want activated.

This system offers the astonishing feature that you can change between extremely different registrations at the touch of a button. You can alter the registration of upper and lower manuals, the pedals and all special effects with a single finger. You can vary from a solo trumpet with delayed vibrato to a drawbar sound with WERSIVOICE or from a synthesizer-like registration with wah-wah and slalomatic to a string orchestra.

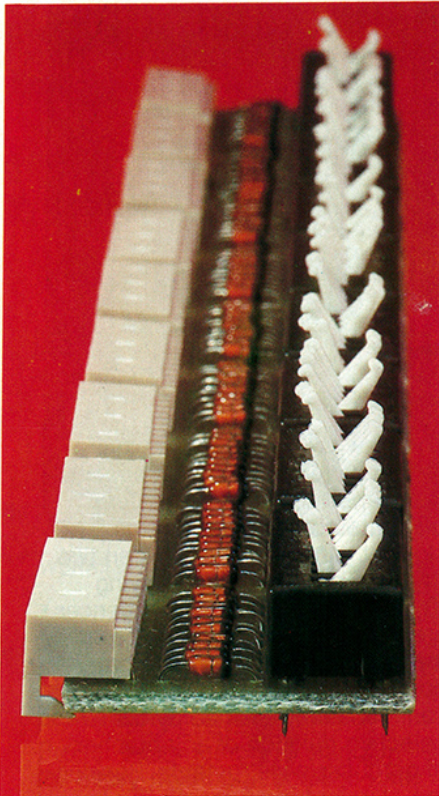




WERSIDATA Programming in All WERSI Organs, from the ORION to the GALAXY



With WERSIDATA even the coach of the German national soccer team Helmut Schon would be able to play like a pro.



The program plug-in board which memorizes the desired registration.

The program plug-in cards are easily accessible in the organ and you will be pleasantly surprised about the cost. You may want to establish your own program library.

Do not confuse this programming feature with pre-set tabs. WERSI and many other organ brands have pre-set tabs. These are usually hard-wired. The WERSIDATA programming has almost unlimited control flexibility which you determine.

Let us illustrate this with an example. You will need 5 complex registrations to play through a complicated symphony. You select these registrations and "freeze" them on the program cards. These cards are then plugged into the master board. Now these registrations are at your fingertips through the program call buttons 1 through 5. These programs (stop combinations held in memory) may be called in any sequence. You can devote your complete attention to the music sheet and your playing techniques since it only takes a fraction of a second to call a new setting. This represents a convenience professionals and laymen have long waited for.

The liturgical organ, the „Classica“, contains a number of standard programs including flute and principal choirs, plenum and tutti. There are many more programs available for classical music which can be stored in a library for exchange by the organist. The program addressing (replacing the combination action) is accomplished with foot or hand switches.

Let WERSI demonstrate their organs for you. You will agree with us that playing one of these instruments with the help of WERSIDATA is a real joy.

Kit Pak

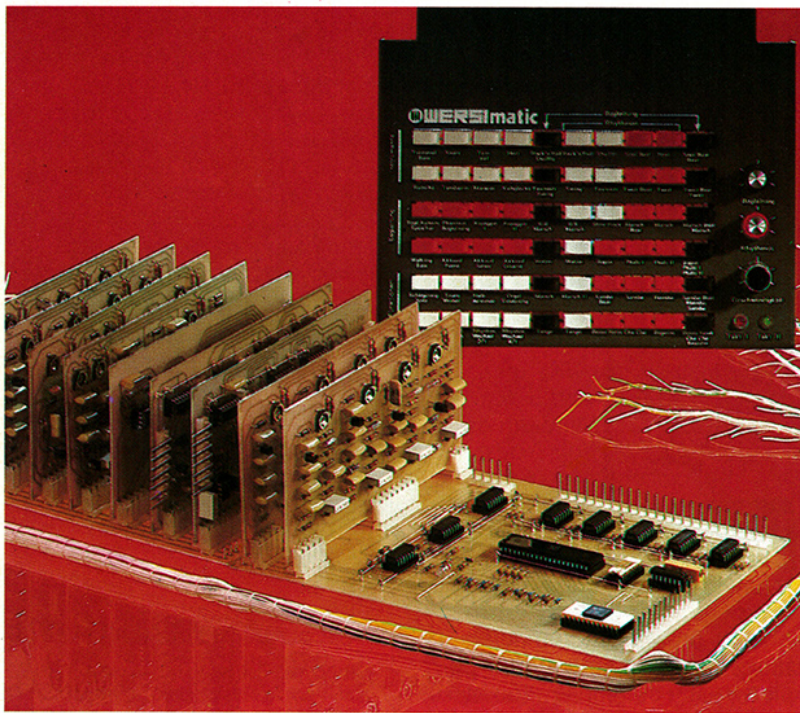
14



Rhythm Accompaniment
At Its Best
WERSIMATIC
Push Button Panel
Wiring Harnesses

Kit Pak 14

Order No. 014



WERSIMATIC Rhythm, Touch Control,
Auto Accompaniment, Control Panel
and Wiring Harness.



The WERSIMATIC Rhythm elegantly
fits every WERSI Organ.

The new WERSIMATIC rhythm has 24 patterns and 15 instruments. It is generously equipped. Two measures contain up to 32 pulse slots. It can alternate between two rhythms giving you a satisfying rhythm pattern. Identical sequences are repeated only after 4 or 8 measures. All rhythms can be combined at will. Additional rhythm variations are obtained by the selective deletion of any number of percussive instruments. Besides the standard instruments like bass drum, snare and cymbals the following instruments are also available: high hat, cowbell, washboard, tambourin, maracas, bongos and tom toms. Choose between waltz and hot latin rhythms or between march and disco. There is a rhythm for any occasion.

During the phases of conceptual design WERSI sought and gained the expert advice of such professionals as Berry Lipman, Franz Lambert, Klaus Wunderlich and Kurt Bong.

Rhythm Patterns

Rock'n Roll
Shuffle
Soul Beat
Swing
Foxtrot
Twist Rock
Twist
6/8 March
Slow Rock
March Rock
March
Waltz

Bajong
Disco I
Disco II
March II
Rock Samba
Samba
Mambo
Tango
Bossa Nova
Cha Cha
Beguine
Rock

Instruments

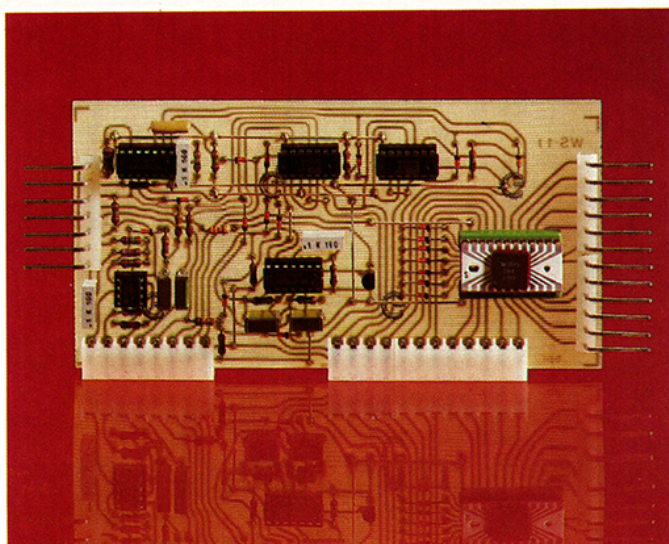
Bass Drum
Low Tom Tom
High Tom Tom
Low Bongo
High Bongo
Snare
Small Cymbal
Large Cymbal
Small High Hat
Large High Hat
Woodblock
Maracas
Washboard
Tambourin
Cowbell

Auto Accompaniment

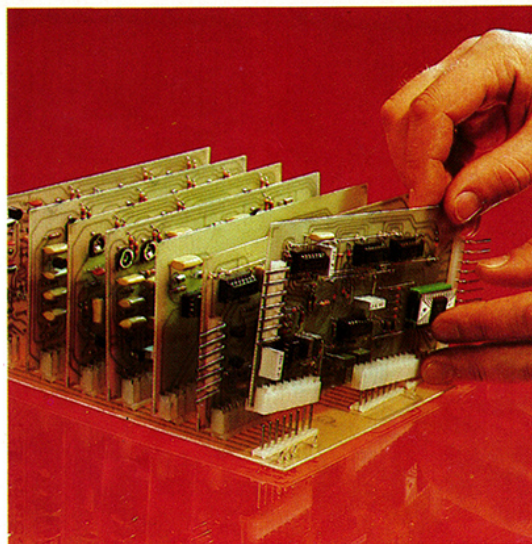
Walking Bass
with Bass Guitar
Low Chord-Piano
Low Chord-Harpsichord
Low Chord-Guitar
Arpeggio I (high)
Arpeggio II (high)
One-Finger
Memory
Autochord-Memory
Autochord
12 Accompaniment
Patterns
(independent)

FUNCTIONS

Start/Stop
Tempo Pre-set
Drum Break
Snare Roll
Manual Rhythm
Touch Rhythm
Alternate 2-2
Alternate 4-4
Accompaniment Volume
Rhythm Volume
Tempo
Downbeat LED for
Group I, Group II



WERSIMATIC in modern integrated plug-in technology.



WERSIMATIC Touch Control and Auto Accompaniment.

Micro computer IC's control the rhythms and accompaniment and replace tens of thousands of conventional components.

Preset beat memory is standard for every rhythm. In addition, the rhythm speed is continuously variable if so desired.

The WERSIMATIC can be built into any WERSI organ or can be easily adapted for other organ makes. All percussion instruments sound like their live counterparts. This is the result of many jam sessions among best-known professional musicians.

All function switches, the tempo and volume controls are concentrated on a single control panel.

They are arranged and color coded for fast recognition. The circuitry consists of several plug-in boards for easy assembly. The wiring is accomplished through a ready-made harness.

The WERSIMATIC can be controlled by hand or footswitch or can be triggered from a keyboard or pedal. The tempo is widely variable or can be pre-set for each rhythm. It is believed that this is the most sophisticated rhythm machine on the market today.

WERSI dedicated special attention to the auto accompaniment section for the WERSIMATIC. It has its own master oscillator, top-octave-synthesizer and integrated frequency dividers. This makes the WERSIMATIC completely

independent of the organ's tone generation. Very few wires are required to interface it with the host instrument.

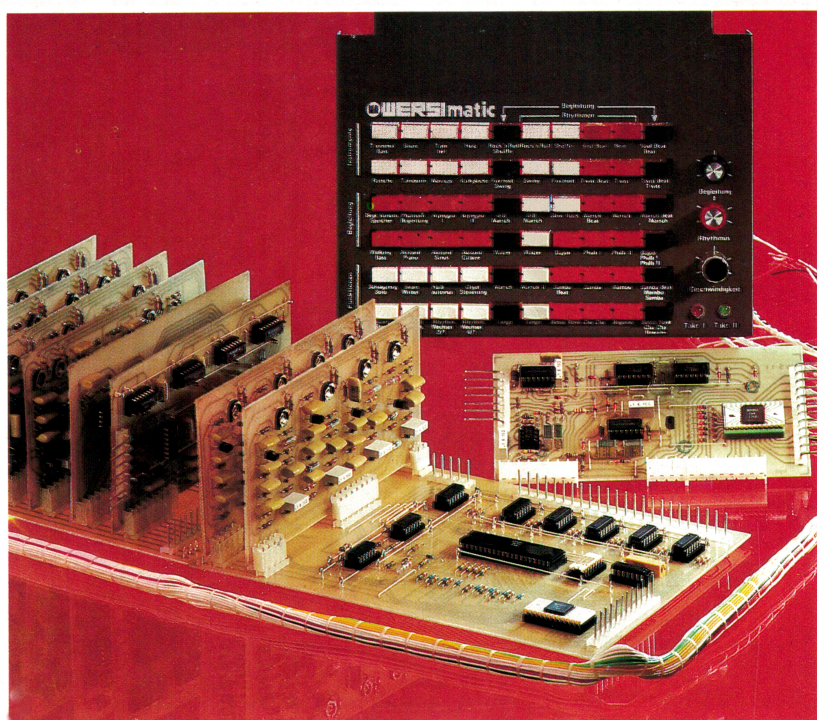
The auto accompaniment arpeggiates over high and low chords. It complements the carrying melody with matching harmonies with or without rhythm group. There is a selection of voices for these chords. In addition the WERSIMATIC produces a true walking bass with several varied patterns – the days of mere alternating bass are over. The bass, by the way, has the same characteristics as our organ's fabulous bass guitar from the pedals. The accompaniment sound picture becomes very transparent due to the bass guitar's distinctive pluck.

Kit Pak

14



Rhythm Accompaniment
At Its Best
WERSIMATIC
Push Button Panel
Wiring Harnesses



WERSIMATIC Rhythm, Touch Control, Auto Accompaniment, Control Panel and Wiring Harness.

The auto accompaniment has its own rhythm control IC. It can be played independently, that is, without a percussive rhythm section. The voicing for the low chord is designed to simulate a piano or a guitar. The arpeggiated high chord can be added for further variations of the sound pattern. The WERSIMATIC auto accompaniment offers a very lively organ accompaniment without the tiring effects of fixed alternating chords and bass.

In short, the WERSIMATIC replaces a live rhythm group consisting of a drummer and two guitar players. Like its real counterparts it masters more than just major chords namely minor, diminished and seventh. If you so desire you can play these chords using a single finger by depressing the root key on the lower manual. The corresponding chord will be memorized by the WERSIMATIC until you press another key.

Should you be more ambitious and want to select your own chords the WERSIMATIC can be set to the key-memory mode. Then depress any desired group of keys on the lower manual. The WERSIMATIC will remember this combination and will play high and low chords as well as walking bass accordingly. Of course, you can turn off the memory and the chord will only be heard while the keys are held.

The musical capabilities of the WERSIMATIC auto accompaniment enrich your organ playing with a multitude of surprisingly complicated melody patterns.

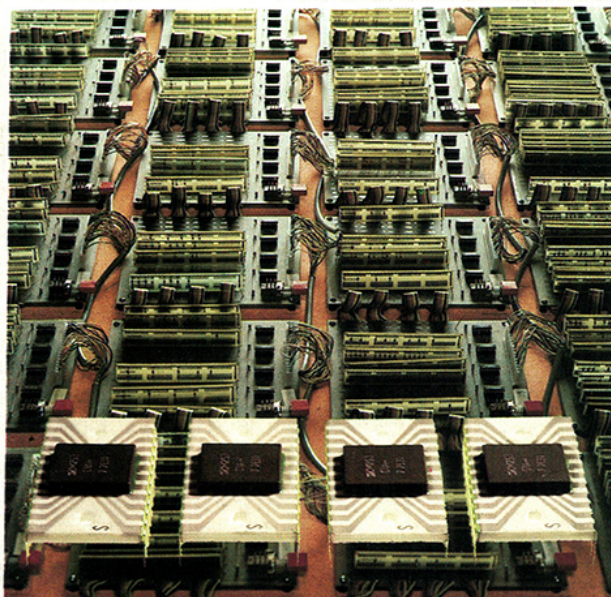
The secret lies in the proprietary IC's WERSI developed. The auto accompaniment is controlled by the same key contact which operates the organ's electronic keyers. No additional key contacts are required.

T.S.O.P.

The WERSIMATIC Auto Accompaniment allows you to play all shown notes using one finger only.

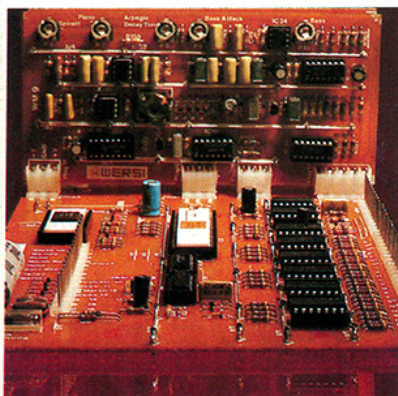
WERSIMATIC
Phantom Accompaniment

Min. Dim. Sev.



Breadboard
WERSI concentrated the circuitry from a 4 x 5 feet breadboard into 4 IC's.

WERSIMATIC Auto Accompaniment with Walking Bass, Chords and Arpeggios.



The WERSIMATIC rhythm and auto accompaniment represents a generously equipped background band at a sensational price. Figure if you hold a chord on the lower manual the organ will produce, for example, a full drawbar sound and the electronics shown here will accompany you with low chords, high arpeggiated chords, a walking bass and up to fifteen percussion instruments.

The WERSIMATIC auto accompaniment has twelve rhythm patterns of its own which are independent of the percussive rhythm section. Rhythms and accompaniments can be combined at will.

In summary the WERSIMATIC consists of two independent units. Both the rhythm group and the auto accompaniment can be operated separately. Because of its own tone generator system the WERSIMATIC is well suited to be included with any organ brand.

WERSIMATIC Rhythm WM24

Now You Master 24 Rhythms and 15 Instruments!

The new WERSIMATIC rhythm comes in two versions. The WM 24 is a low-profile wood cabinet containing the basic rhythm unit. The WM 24 b model has auto accompaniment added to the basic rhythm (in a separate cabinet). For technical information on rhythm and accompaniment see pages 68 through 71.

The WERSIMATIC rhythm WM 24 adds a versatile rhythm group to any organ. It offers a variety of patterns from Latin over Waltz to Disco. The 15 instruments sound like their real counterparts.

The WM 24 has a built-in power supply. The signal output can be fed to any power amplifier or routed through the organ. Most organs have provisions for signal inputs like tape playback or the like.



Rhythmen Patterns

Rock'n Roll
Shuffle
Soul Beat
Swing
Fox rot
Twist Rock
Twist
6/8 March
Slow Rock
March Rock
March
Waltz
Bajong
Disco I
Disco II
March II
Rock Samba
Samba
Mambo
Tango
Bossa Nova
Cha Cha
Beguine
Rock

Instruments

Bass Drum
Low Tom Tom
High Tom Tom
Low Bongo
High Bongo
Snare
Small Cymbal
Large Cymbal
Small High Hat
Large High Hat
Woodblock
Maracas
Washboard
Tambourin
Cowbell

WERSIMATIC Rhythm WM 24
table top model

Kit Order No. 320 Assembled Order No. 9320

WERSIMATIC Rhythm
and Auto Accompaniment WM 24 b

Kit Order No. 321 Assembled Order No. 9321

WERSIMATIC
Auto Accompaniment for the WM 24

Kit Order No. 322 Assembled Order No. 9322

WERSIMATIC Auto Accompaniment Chords, Arpeggios and Walking Bass

The Auto Accompaniment electronics is located in a separate cabinet. The keyboard is used to select the desired keys or chords. Whether you play one-finger chords or your own chords a built-in memory stores those keys touched until you enter a new command on the keyboard. The auto accompaniment plays low and arpeggiated high chords as well as a

lively walking bass. This enables you to lend your full attention to the melody playing.

The auto accompaniment has its own master oscillator and top-octave-synthesizer. The combination „Rhythm Unit and Auto Accompaniment“ can be used with any make organ since its own tone generator is independent of any outside tone

system. It can really be thought of as an instrument in its own right.

If you originally purchased only the WERSIMATIC rhythm unit WM 24 you can upgrade it anytime by adding the Auto Accompaniment, WM 24 b.

The Auto Accompaniment can be operated only in conjunction with the rhythm unit.



Auto Accompaniment

- Walking Bass
- with Bass Guitar
- Low Chord-Piano
- Low Chord-Harpsichord
- Low Chord-Guitar
- Arpeggio I (high)
- Arpeggio II (high)
- One-Finger
- Memory
- Autochord-Memory
- Autochord
- 12 Accompaniment
- Patterns
- (independent)

WERSIMATIC Rhythm and Auto Accompaniment WM 24 and WM 24 b can be added to every organ make.



Functions

- Start/Stop
- Tempo Pre-set
- Drum Break
- Snare Roll
- Manual Rhythm
- Touch Rhythm
- Alternate 2-2
- Alternate 4-4
- Accompaniment Volume
- Rhythm Volume
- Tempo
- Downbeat LED for
- Group I, Group II



Kurt Bong, a top-rated percussionist, at work in the WERSI labs.

WERSI Piano

New Voices — from Piano over Harpsichord to Banjo

The WERSI Piano shows the possibilities that exist today in the electronic production of music. Besides a well-sounding piano it offers voices like Celeste, Kinura,

Harpsichord, Player Piano, Hawaiian Guitar, Harp and Vibraphone. It has its own vibrato, slalom and even sounds like an organ. It further offers dynamic touch control as well as sustain and damper pedals. It is designed with easy to assemble plug-in circuits. It has a built-in earphone amplifier and provisions for an external amplifier.

The slalom allows you to shift the pitch of the instrument downward by a full octave. You could look at this feature as a keyboard extension or consider it as a synthesizer-like glide effect.



The piano comes in two models: piano top only — with or without steel legs — or piano top mounted on a base with built-in amplifier and speaker. The top can be separated from the base in a matter of seconds making it fully portable.

A large variety and a contemporary design have made the WERSI Piano popular. It is easy to assemble. You simply install the components on the circuit boards and connect the supplied wiring harnesses — and your piano is ready for playing.

WERSI Piano, Piano Top complete	
Kit Order No. 310	Assembled Order No. 9310
Steel legs	Assembled Order No. 9315
WERSI Piano, Piano Base complete	
Kit Order No. 311	Assembled Order No. 9311
WERSI Piano, Top and Base complete	
Kit Order No. 312	Assembled Order No. 9312

WERSI String Orchestra

From the Singing Violin
to the Sound of a
String Choir

The WERSI String Orchestra opens new fascinating sound dimensions. Two sets of 5 voices can be blended separately for left and right hand. It has a polyphonic manual, split for left and right hand use.

Adjustable attack and sustain times along with an electronic delay line create realistic solo instruments and entire string choirs. A plucked bass and a string bass are added for the

left hand. It has built-in half-tone and octave shifts as well as vibrato.

You can operate the String Orchestra independently or together with any electronic organ. Play it through the organ or external amplifier.



Udo Jurgens loves his
WERSI String Orchestra
on stage.



Specifications:

4-octave keyboard (49 keys) from
C to C, split manual:

bass – 24 keys, treble – 25 keys

Voices:

Violin, Viola, Cello, Orchestra I
and Orchestra II, Attack and
sustain controls, separately for
both halves

Special Functions:

Left hand plucked and string bass,
pitch control, half-tone shift,
slalom, tone and volume controls,
swell pedal

Power: 110/220 VAC, 40 Watts

The WERSI String
Orchestra comes assembled
only.

You will like its styling and
price.



WERSI String Orchestra, assembled, in vinyl-clad cabinet
with cover, music rack and swell pedal.

Assembled Order No. 9330

WERSIVOICE Rotor Sound · String Choir

The Versatile Accessory for Organs and Solo-Instruments

WERSIVOICE is a versatile effect machine for home, stage or sound studio. WERSIVOICE is a sound modifier. It creates the typical and well-known rotating baffle sound giving your organ the splendid fullness which is so ear-pleasingly familiar.

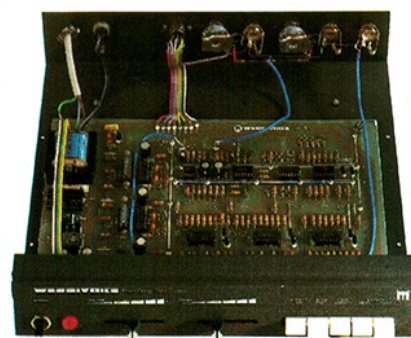
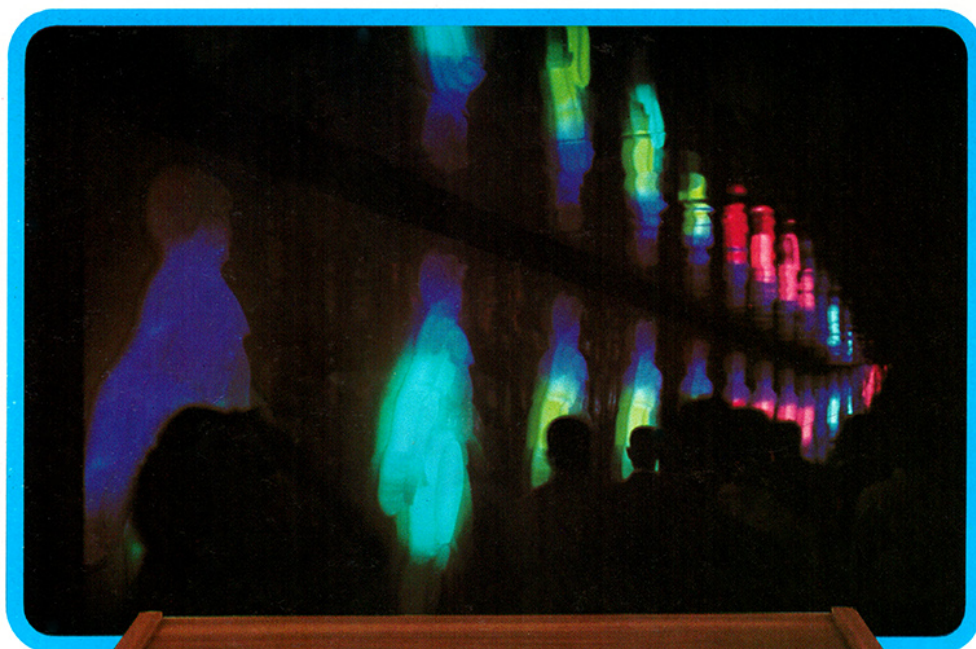
Recording is finally simplified by the absence of formerly needed microphones.

In the „choir“ mode the WERSIVOICE is an electronic „multiplier“. That means the incoming solo voice appears at the output as being „multiplied“ as an ensemble or a choir of voices.

The WERSIVOICE is simply inserted between an instrument and its amplifier system. The WERSIVOICE does wonders for your organ, no organ is complete without it.

Try it with your miked sax, trumpet, violin, guitar and accordion for really varied effects.

For additional information see Kit Pak 10, page 62 and 63.



Specifications:

Functions: Effect On/Off, Slow/Fast, Choir/Vibrato, Effect Deep, Effect Flat

2 inputs: sensitivity adjustable from 100 mV to 1 VRMS

Input Impedance: 1 MOhm/Volt (sensitivity)

Output: adjustable 0 to 1 VRMS

Signal to noise ratio: 60 dB

Power: 110/220 VAC, 50/60 Hz

Dimensions: 14" wide x 3.5" high x 11" deep

WERSIVOICE, Rotor Sound – String Choir,
in Walnut Cabinet

Kit Order No. 300

Assembled Order No. 9300

WERSI Mixer 2004

Pro Capabilities
for Home, Discotheque
and Sound Editing

The WERSI Mixer 2004 offers 9 inputs: 2 mono mikes, stereo mike, 2 tapes, 2 turntables, tuner, and 2 auxiliaries. Each input has its own level control. The mixed-signal amplifier has a master volume control, treble and bass controls, a balance control and an LED overload indicator. The mixer has a built-in calibration oscillator and these additional features:

rumble and hiss filter, mono/stereo switch and a dynamic noise limiter with its LED indicator.

A master reverb control is provided for the optional built-in spring reverb or an external unit.

A single printed circuit board contains all the electronics. The wiring is limited to connecting the AC line input.

Specifications:

Inputs:
Mike I, high/low impedance, mono
Mike II, high/low impedance, mono
Mike, stereo
Tuner, stereo
Turntable I, mag./linear, stereo
Turntable II, mag./linear, stereo
Tape I, stereo
Tape II, stereo
Auxiliary I, stereo
Auxiliary II, stereo
Outputs:
Both channels
Left channel
Right channel
Tape record/playback



You find an assortment of selected headphones in our price list.

The WERSI Mixer 2004 comes with a walnut base. The slanted front panel makes for easy control set-up. A matching smoked acrylic dust cover is available at extra cost.

WERSI Mixer 2004, Walnut

Kit Order No. 350 Assembled Order No. 9350

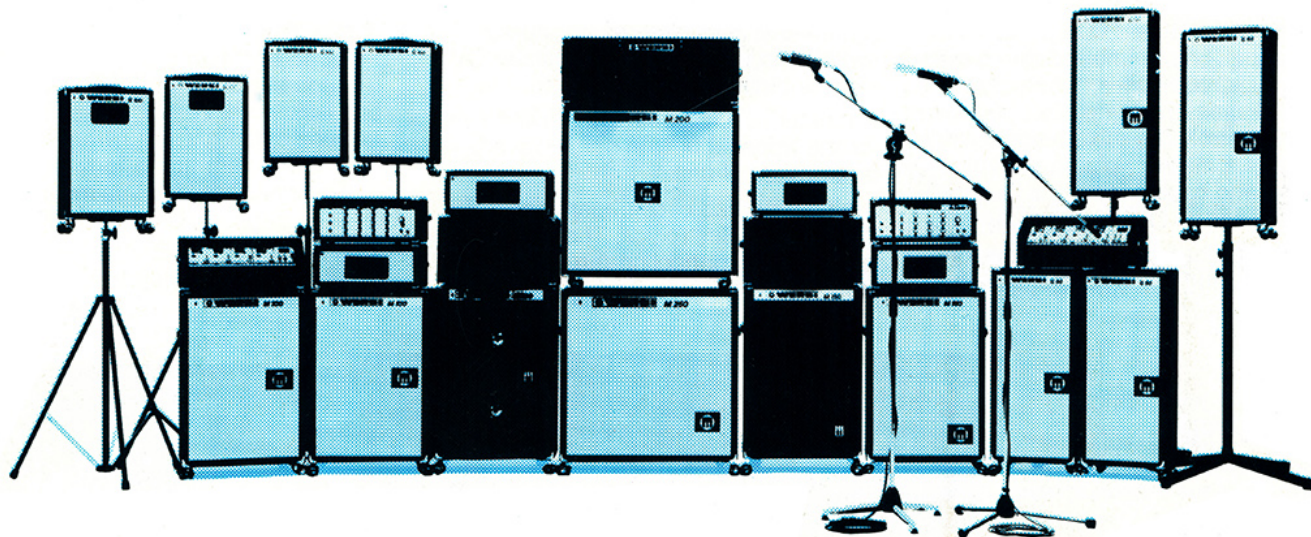
WERSI Mixer 2004 with Reverb, Walnut

Kit Order No. 351 Assembled Order No. 9351

Dust Cover Assembled Order No. 9352

WERSI PA Instruments

Amplifiers, Speakers and Accessories
for the Pro and the Amateur



Along with the organ program WERSI offers a broad line of PA systems and accessories. Amateur and pro bands will find an extensive line of amplifiers, audio mixers, speaker cabinets, speakers and accessories in this section.

You can benefit from WERSI's technical and musical know-how which results in easy do-it-yourself construction, optimum power efficiency, musical perfection and application versatility.

The WERSI's PLANAR and PROFESSIONAL SERIES amplifiers are easy to put together. All cabinets and mechanical parts are pre-fabricated and ready-made wiring harnesses are supplied.

We shall gladly assist you in the tailoring of a PA system for your particular needs. We carry equipment that is specialized for the sound reproduction of organs, guitar, bass and voice. Be it a system with 140 Watts or a power house the WERSI program can be customized to fill the bill.

Our speaker cabinet kits are externally finished with rugged black vinyl. You only install the speakers, crossovers and a few wires.

We supply the high quality parts and you invest the assembly time. The result: An exceptional value for your Dollar.



WERSI Planar Amplifier

For Instrument and Voice

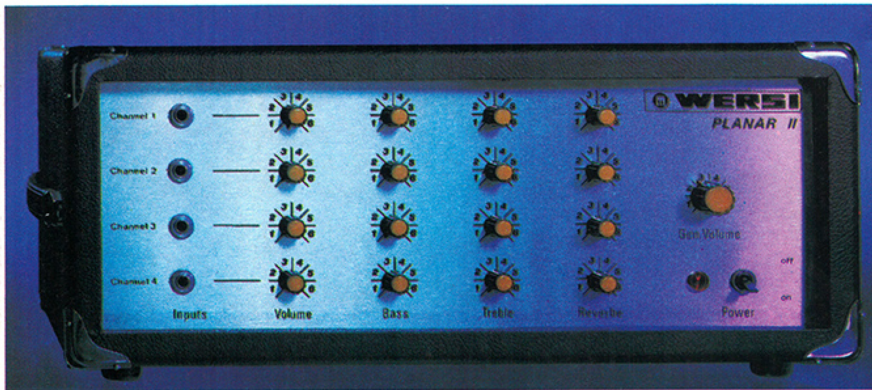
Compact Power – ruggedly packaged



Specifications:

- 140 Watts continuous power
- 4 inputs switchable to 2 channels
- Controls for volume, bass, treble, reverb and brilliance
- 2 inputs to tremolo channel with adjustable speed and intensity
- Footswitch for tremolo
- Optional built-in spring reverb
- Output short circuit proof
- Connector for external echo
- Dimensions: 19.5" wide x 8" high x 11.5" deep

The Planar I is a compact instrument amplifier for use with organ, guitar, etc. Its rugged vinyl-clad case and the anodized front panel will withstand road service. The electronics is mounted on an inserted chassis.



Specifications:

- 140 Watts continuous power
- 4 inputs to 4 channels
- controls for volume, bass, treble, reverb and brilliance
- Channel volume control
- Master volume control
- Optional built-in spring reverb
- Output short circuit proof
- Connector for external echo
- Dimensions: 19.5" wide x 8" high x 11.5" deep

The Planar II is an economical voice amplifier as rugged as the Planar I. This 4-channel amplifier with individual sensitivity controls finds wide-spread acceptance and use.

Planar I Instrument Amplifier

Kit Order No. 400*	Assembled Order No. 9400
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Planar II Voice Amplifier

Kit Order No. 401*	Assembled Order No. 9401
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* Assembly Manuals in German only



WERSI Professional Series

Custom Mixer and Mixer/Amplifier

The Professional Series is a program of pre-amplifier plug-ins and a twin power amplifier. You have the freedom of selecting the preamplifiers that suit your particular application. If your requirements should change you replace a preamp by inserting another. Unused plug-in positions can be covered with blind bezels.

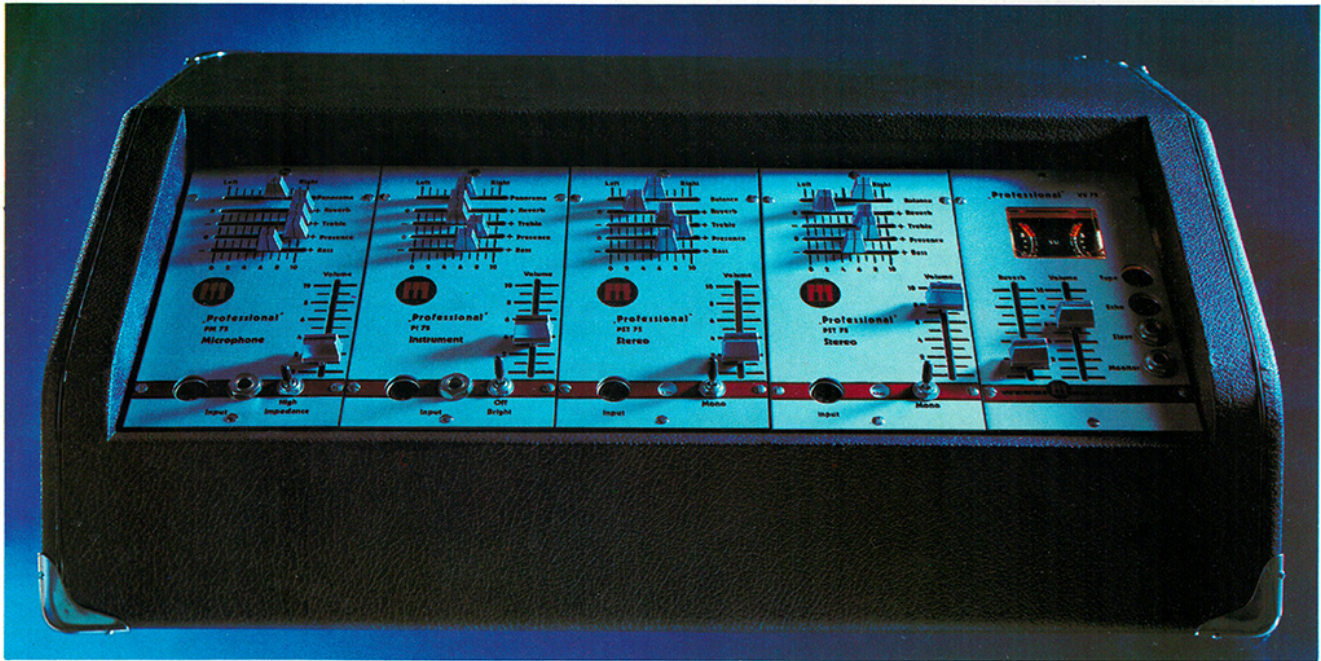
The fundamental unit has room for 4 preamplifiers. It contains the master plug-in with its controls and VU meters. It also houses the power chassis with two 150 W power amplifiers (see page 81) and a spring reverb.

If your requirements should outgrow the mixing capabilities of the main unit you can easily add the Auxiliary Mixer Console (see page 81) with its own 5 plug-in positions. Should you need more than 300 Watts of power, you have the possibility of adding Slave Amplifiers (see page 83).

WERSI Professional Series, Main Unit with 4 preamps (types PM and/or PI) and 300 Watts of power

Kit Order No. 420

Assembled Order No. 9420



Mike Plug-In PM 75

Volume Control
Bass Control
+ 15 dB/ - 26 dB
Presence Control
+ 18 dB at 2.5 kHz
Treble Control
+ 18 dB/ - 33 dB
Panorama Control
Reverb Control
Input Sensitivity
.3 mV at 200 Ohms
Input Sensitivity
3 mV at 25 kOhms

Instrument Plug-In PI 75

Volume Control
Bass Control
+ 15 dB/ - 26 dB
Presence Control
+ 18 dB at 2.5 kHz
Treble Control
+ 18 dB/ - 33 dB
Panorama Control
Reverb Control
Brilliance Switch
+ 35 dB at 10 kHz
Input Sensitivity
50 mV at 50 kOhms

Stereo Plug-In PST 75, linear for tape, tuner, piezo pickup

Volume Control
Bass Control
+ 15 dB/ - 26 dB
Presence Control
+ 18 dB at 2.5 kHz
Treble Control
+ 18 dB/ - 33 dB
Balance Control
Reverb Control
Mono/Stereo Switch
Input Sensitivity
200 mV at 680 kOhms

Stereo Plug-In PST 75, magnetic for magnetic pickup

Volume Control
Bass Control
+ 15 dB/ - 26 dB
Presence Control
+ 18 dB at 2.5 kHz
Treble Control
+ 18 dB/ - 33 dB
Balance Control
Reverb Control
Mono/Stereo Switch
RIAA deemphasis
Input Sensitivity
4.5 mV at 50 kOhms

Master Plug-In PVU 75

Power Supply for all
plug-ins including
Aux. Mixer Console
Twin VU meters
Master Volume Control
Master Reverb Control
Tape record/playback
connector
Ext. Echo connector
2-channel slave jacks
Headphone jack

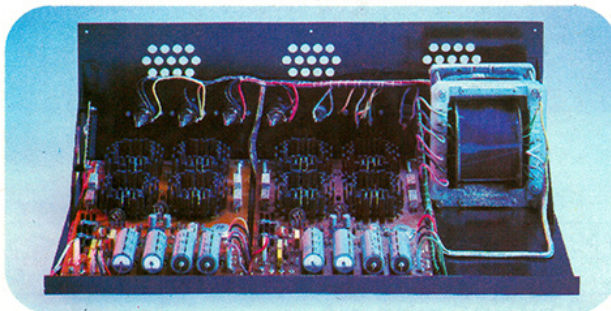
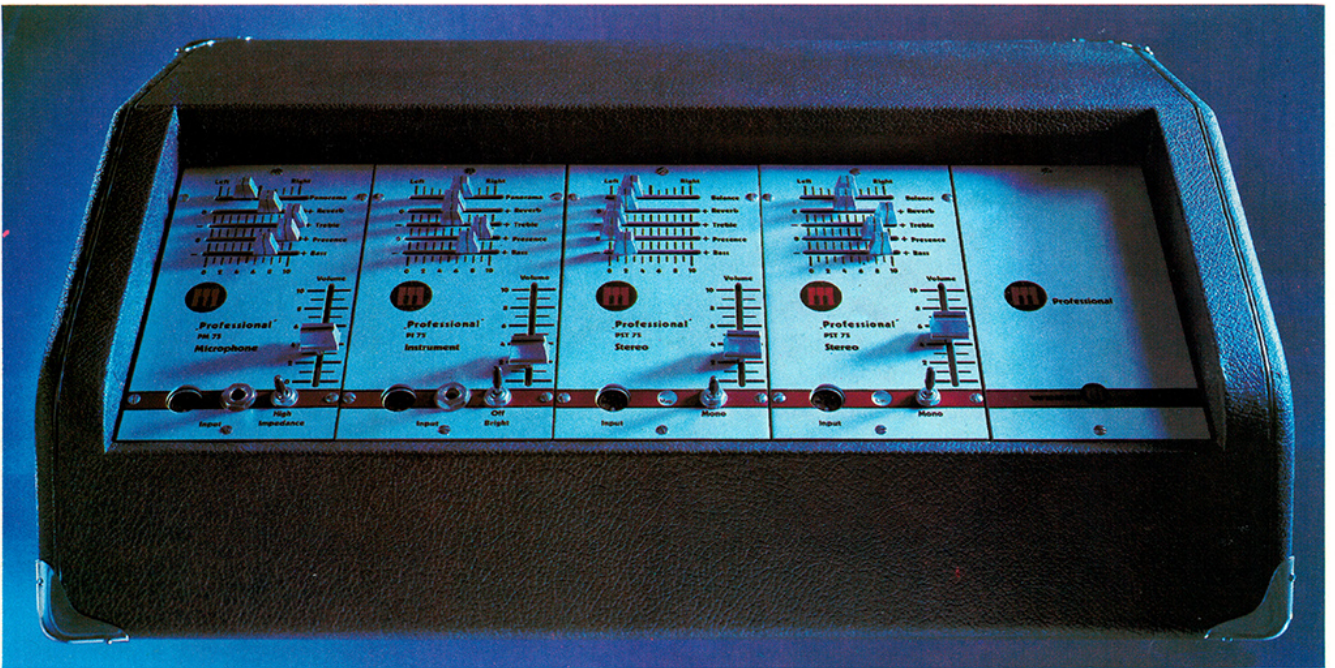
By the addition of the WERSI Professional Series Auxiliary Mixer Console you can enlarge the mixing capabilities to a total of 9 plug-in preamplifiers. If used as a mike mixer only you can connect a grand total of 18 microphones since the mike plug-ins have twin inputs.

The Auxiliary Mixer Console is connected to the main unit via a 6-conductor cable through which the auxiliary mixer receives its power.

WERSI Auxiliary Mixer Console
with 5 plug-ins (types PM and/or PI)

Kit Order No. 421

Assembled Order No. 9421



Power Chassis

Two short circuit proof power amplifiers (150 Watts continuous power each) and a special tape-wound power transformer are mounted on a steel chassis which is inserted at the rear of the main unit's housing. A wiring harness takes care of the chassis wiring and ties into the master plug-in PVU 75.

Professional Series Power Chassis

Kit Order No. 426

Assembled Order No. 9426

Master Plug-In PVU 75

A steel tray contains a mother PC board with the circuitry and bus bars common to all plug-ins. The circuitry includes a regulated power supply (for 9 plug-ins), the reverb and headphone amplifiers. The master plug-in itself incorporates twin VU meters, master controls for volume and reverb, connector for tape record/playback, connector for external echo, monitor jack for headphones and a stereo jack for slave amplifiers.

Mike Plug-In PM 75

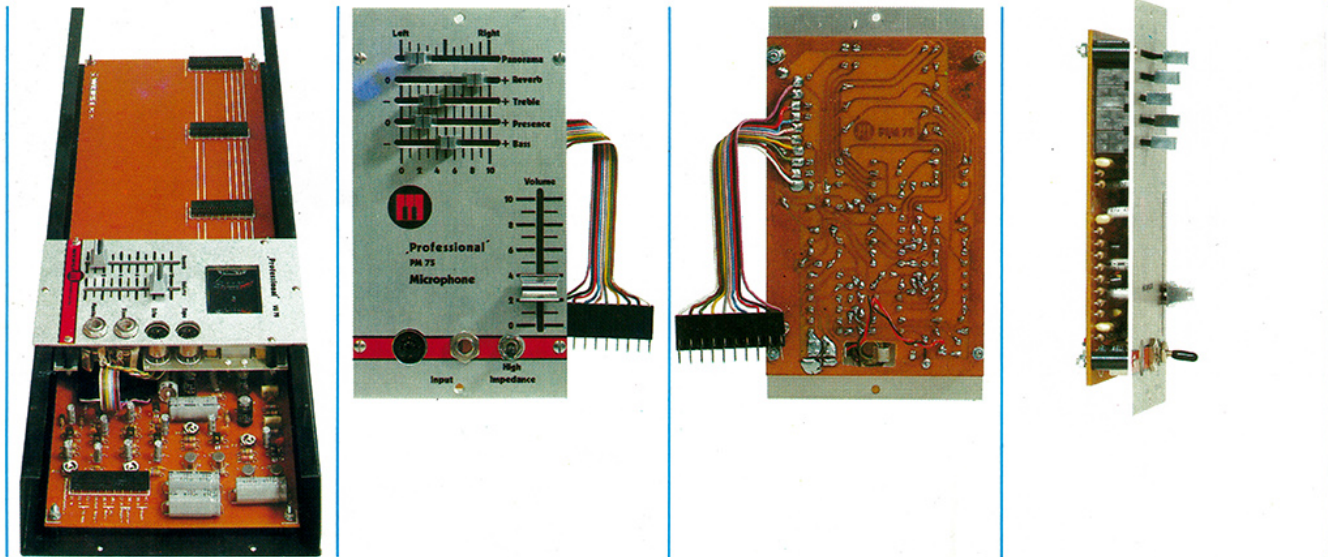
Two inputs are switchable for high and low impedance microphones. Up to 2 mikes can be connected to the paralleled inputs. The main unit will thus accommodate up to 8 mikes and the auxiliary mixer an additional 10. The plug-in panel contains controls for volume, bass, presence, treble, reverb and panorama. The signal-to-noise ratio of 72 dB and an overload factor of 100 are significant qualities of this plug-in.

Instrument Plug-In PI 75

This plug-in boasts the identical features of the mike plug-in PM 75. It is designed, however, for an input sensitivity of 50 mV for high level sources like guitar pick-ups, organs, etc.

Stereo Plug-In PST 75

By including this module your „Professional” becomes a full-fledged high fidelity stereo mixer/amplifier for use with tape decks, tuners and the like. The input amplifier stage can be layed out either for 4.5 mV (magnetic pick-up) or for 200 mV sensitivity.



Master Plug-In PVU 75

Kit Order No. 425 Assembled Order No. 9425

Mike Plug-In PM 75

Kit Order No. 422 Assembled Order No. 9422

Instrument Plug-In PI 75

Kit Order No. 423 Assembled Order No. 9423

Stereo Plug-In PST 75

Kit Order No. 424 Assembled Order No. 9424

Steel Tray for Aux. Mixer Console

Kit Order No. 427

Housing for Aux. Mixer Console

Kit Order No. 428

Blind Bezel

Assembled Order No. 9429



WERSI Slave Amplifiers

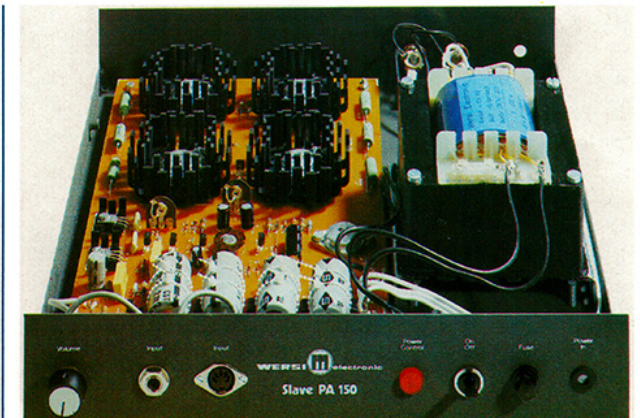
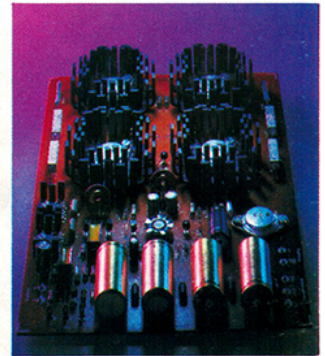
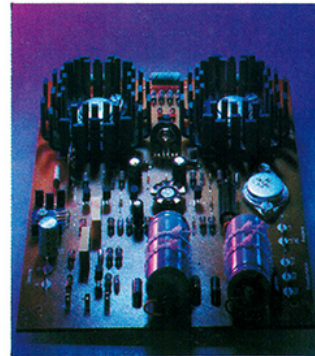
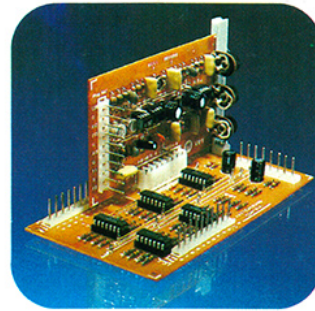
When the Amplifier Power Must Grow

Our Slave amplifiers are audio power stages which can be fed by preamplifiers or the outputs of other power amplifiers. They have their own power supplies. Slave amplifiers can be used to boost the power capacity of the WERSI Planar or Professional Series amplifiers. They perfectly match WERSI's Audio Mixer 2004 or any other commercial mixer or preamp.

Slaves are available with 70 or 140 Watts of continuous power. The smaller version is primarily intended for home use while the 140 Watt version help to fill a good-size auditorium.

DC-coupled outputs which are short circuit and open circuit proof and self-contained power supplies distinguish these rugged power amplifiers.

Add our preamplifier VV 1 to your Slave if you need active tone control.



WERSI offers amplifier circuit boards without housing with 70 and 140 Watts continuous power.

Specifications for the 140 Watt amplifier (Values for 70 Watt version in parenthesis)

Frequency response:	20 Hz to 20 kHz at -2 dB
Harmonic distortion:	less than 1% at rated power
Input sensitivity:	100 to 150 mVRMS
Input impedance:	35 kOhms
Output power:	140 (70) Watts continuous
Output impedance:	2 Ohms (4 Ohms)
Signal-to-noise ratio:	83 dB, open input 86 dB, shorted input
Power:	110/220 VAC, 50/60 Hz
Board dimensions:	7.1 x 9.8" (5.9 x 7.5")

Preamplifier VV 1, mono

Kit Order No. 412

Preamplifier VV 1, stereo

Kit Order No. 415

Power Amplifier 70 Watts

Kit Order No. 413

Power Amplifier, 140 Watts

Kit Order No. 414

Slave Amplifier, 70 Watts

Kit Order No. 410 Assembled Order No. 9410

Slave Amplifier, 140 Watts

Kit Order No. 411 Assembled Order No. 9411

WERSI Voice Speakers

Compact Yet Powerful Speaker Cabinets

The speaker cabinets G 80 and G 100 are designed for rough road service. The special speaker systems are marked by their high efficiency. The models G 100 are our smallest cabinets but nevertheless are very powerful speakers. Both G 80 und G 100 are equipped with chrome casters and carrying handels. They can be out-fitted with elevating tripods (see page 87).

G 80 A for voice, PA

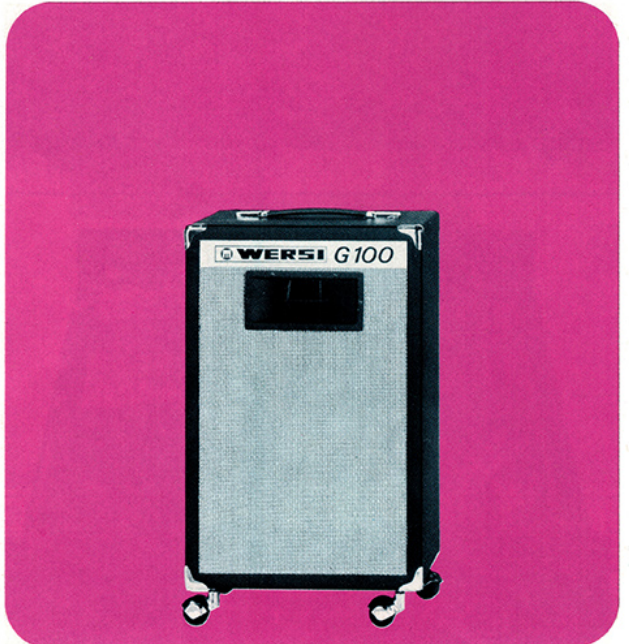
Power capacity: 60 Watts Available in 4, 8, 16 Ohms
 Frequency response: 35 Hz to 25 kHz
 Dimensions: 16" wide x 38" high x 10" deep Weight: 47 lbs

Kit	Order No. 510
Assembled	Order No. 9510

G 80 B for voice, instruments, PA

Power capacity: 100 Watts Available in 4, 8, 16 Ohms
 Frequency response: 35 Hz to 25 kHz
 Dimensions: 16" wide x 38" high x 10" deep Weight: 47 lbs

Kit	Order No. 511
Assembled	Order No. 9511



G 100 H for voice

Power capacity: 100 Watts Available in 4 and 8 Ohms
 Frequency response: 30 Hz to 25 kHz
 Dimensions: 16" wide x 26.5" high x 11" deep Weight: 48 lbs

Kit	Order No. 513
Assembled	Order No. 9513

G 100 D for voice

Power capacity: 100 Watts Available in 4 and 8 Ohms
 Frequency response: 30 Hz to 10 kHz
 Dimensions: 16" wide x 26.5" high x 11" deep Weight: 51 lbs

Kit	Order No. 512
Assembled	Order No. 9512

WERSI Instrument Speakers

For Best Reproduction of
Guitar, Organ, Bass and Voice

A line of speaker cabinets for a broad range of applications. Optimum high power reproduction through speakers with treble cone or Fane Crescendo speakers with aluminum treble dome. For penetrating brilliance and punch you may want to add the horn radiator T 50 (see page 87). Chrome casters are standard. Can be equipped with heavy-duty tripods (see page 87).

M 100 for guitar, organ, bass

Power capacity: 100 Watts Available in 4, 8, 16 Ohms

Frequency response: 30 Hz to 14 kHz

Dimensions: 22" wide x 34" high x 14" deep

Weight: 70 lbs

Kit Order No. 520

Assembled Order No. 9520



M 100 S for guitar, bass

Power capacity: 180 Watts Available in 4, 8, 16 Ohms

Frequency response: 15 Hz to 9 kHz

Dimensions: 22" wide x 34" high x 14" deep

Weight: 96 lbs

Kit Order No. 521

Assembled Order No. 9521



M 200 for instruments, PA

Power capacity: 200 Watts Available in 2, 4, 8, 16 Ohms

Frequency response: 30 Hz to 14 kHz

Dimensions: 33" wide x 34" high x 14" deep

Weight: 117 lbs

Kit Order No. 522

Assembled Order No. 9522

WERSI Bass Speakers

True Fidelity at High Power

High radiation power capability and true sound reproduction make these speaker cabinets well suited for on-stage use. Like all our cabinets they are stackable. If an extension of the upper frequency range is desired you can add a treble radiator T 50 or the horn supplement TX 100 (see page 87).

M 150 for bass, PA

Power capacity: 100 Watts Available in 4 and 8 Ohms

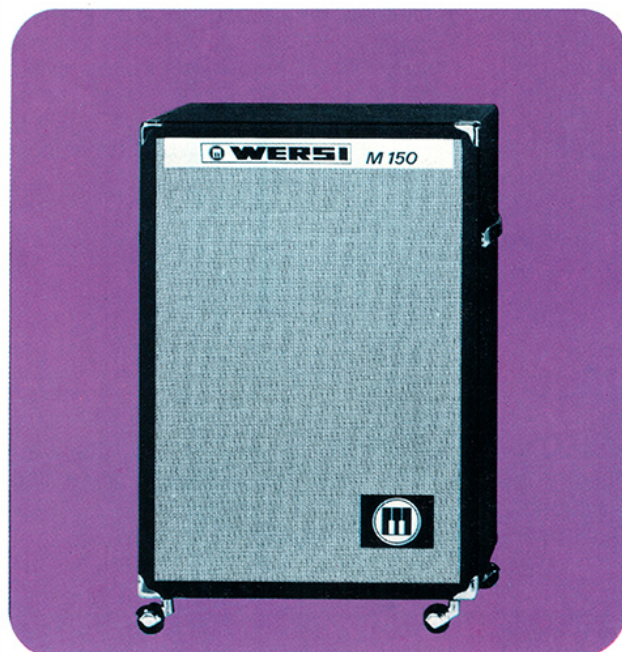
Frequency response: 30 Hz to 9 kHz

Dimensions: 22" wide x 34" high x 14" deep

Weight: 75 lbs

Kit Order No. 530

Assembled Order No. 9530



M 150 S for bass

Power capacity: 125 Watts Available in 4 and 8 Ohms

Frequency response: 25 Hz to 4 kHz

Dimensions: 22" wide x 34" high x 14" deep

Weight: 76 lbs

Kit Order No. 531

Assembled Order No. 9531



M 250 for bass

Power capacity: 180 Watts Available in 4 and 8 Ohms

Frequency response: 30 Hz to 9 kHz

Dimensions: 33" wide x 34" high x 14" deep

Weight: 120 lbs

Kit Order No. 532

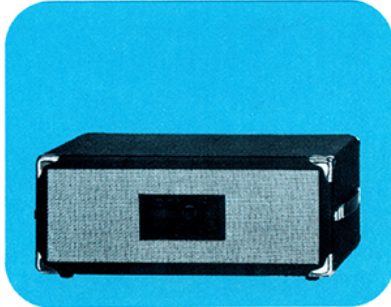
Assembled Order No. 9532

WERSI Horn Supplements

Mike Booms and Speaker Tripods

The line of speaker cabinets of the series M (M 100, M 150 and M 200/250) provides powerful reproduction over the low and middle frequency ranges. By stacking a

horn supplement on top the frequency response is extended well into the highs.

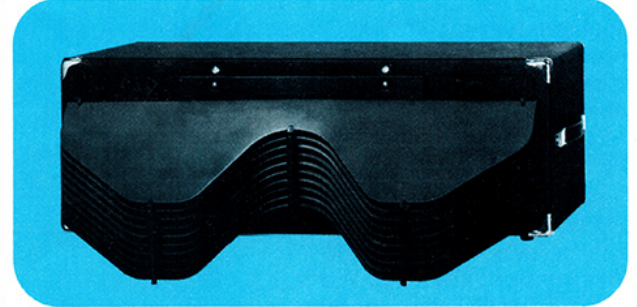


T 50 Treble Horn

Power capacity: 50 Watts
 Frequency response: 1 kHz to 25 kHz
 Dimensions: 20" wide x 8" high x 12" deep

Weight:
 15 lbs

Kit Order No. 500
 Assembled Order No. 9500



TX 100 Dispersion Horn

Power capacity: 100 Watts
 Frequency response: 1 kHz to 20 kHz
 Dimensions: 33" wide x 18" high x 18" deep

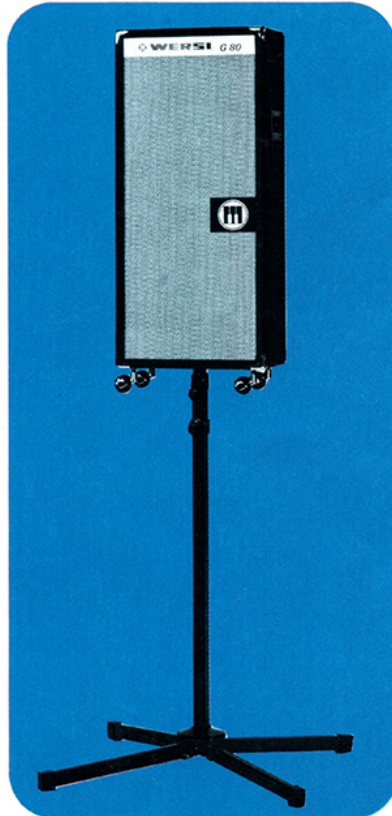
Weight:
 66 lbs

Kit Order No. 503
 Assembled Order No. 9503



Tripods

Light Duty, suited for G 100
Assembled Order No. 9591



Tripods

Heavy Duty, suited for G 80 and M 100
Assembled Order No. 9592



Microphones

We carry a selection of high quality microphones (see Price List).

Mike Booms

Rugged and stable design
Assembled Order No. 9440

WERSITONE Rotor Cabinets

Add That Full Sound to Your Organ

The WERSITONE 3000 is a high-powered tone cabinet solidly built for road service. It has a rotating baffle mounted over a 100 Watt Crescendo speaker. A built-in amplifier boosts the input signal to 140 Watts. A manually or foot-operated remote control can be connected. The cabinet provides the space for an optional reverb unit.

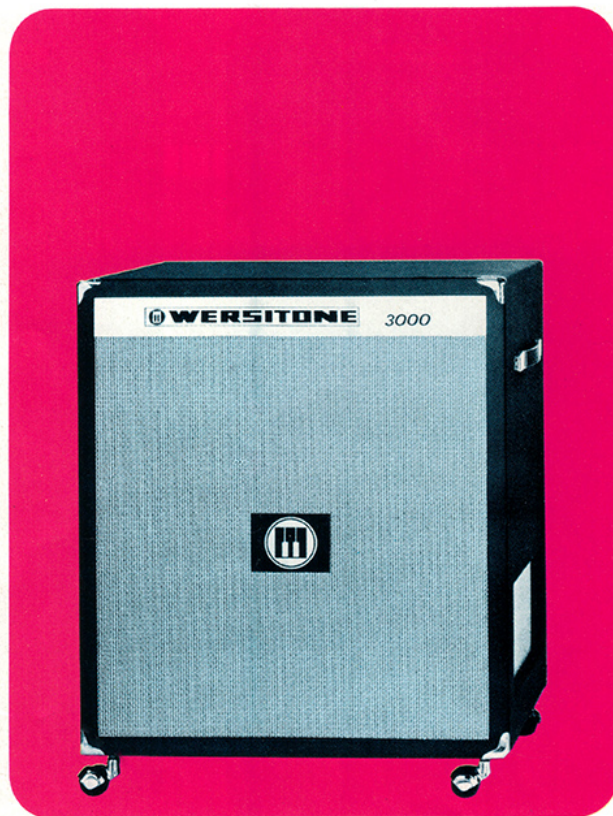
If you want to have increased power handling capacity and emphasized treble brilliance you can add the horn cabinet. It contains a compression driver with a rotating twin horn. The WERSITONE kits are assembled in a few hours.

WERSITONE 3000 with Horn Cabinet

Vinyl-clad case on chrome casters
 180 Watts total speaker capacity
 Rotating twin horn WR 1000
 Compression driver 100 Watts
 WERSIROTOR baffle WR 600
 Crescendo speaker 100 Watts
 140 Watt amplifier
 2 adjustable inputs 20 mV to 1 V
 Power: 220 V/50 Hz only
 Dimensions: 26" wide x 48" high x 20" deep
 (Assembly Manuals in German only)

WERSITONE 3000

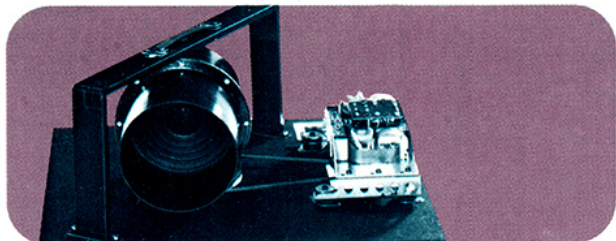
Vinyl-clad case on chrome casters
 100 Watt power capacity
 WERSIROTOR baffle WR 600
 Crescendo speaker 100 Watts
 140 Watt amplifier
 2 adjustable inputs 20 mV to 1 V
 Power: 220 V/50 Hz only
 Dimensions: 26" wide x 31" high x 20" deep
 (Assembly Manual in German only)



Kit (German manual only)	Order No. 541
Assembled	Order No. 9541

Kit (German manual only)	Order No. 542
Assembled	Order No. 9542

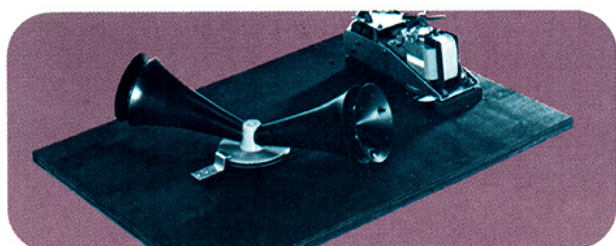
WERSI offers two rotor systems: The rotating loud-speaker WS 350 for organ consoles and the rotating baffles and horns WR 400, WR 600 and WR 1000 for tone cabinets.



Rotor WS 350

Rotating 35 Watt speaker
150 to 10,000 Hz
2 motors (45 RPM and 360 RPM)
Mounted on base plate 18.5" x 18.5"
Optional crossover FW 775 recommended
Power: 220 V/50 Hz only
(German instructions only)

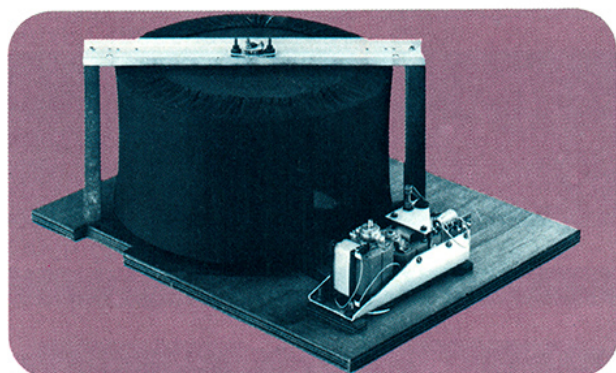
Assembled Order No. 9680



WERSI ROTOR WR 1000

Rotating twin horn
2 motors
Power: 220 V/50 Hz only
(German instructions only)

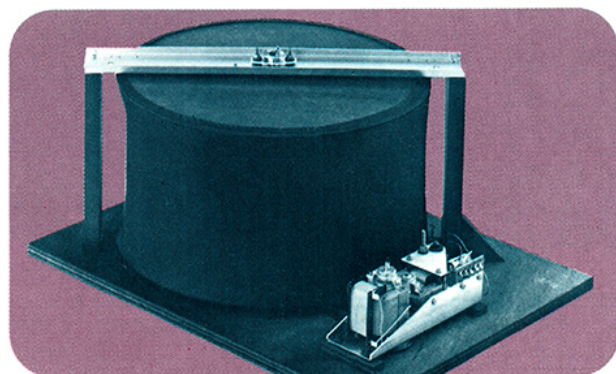
Assembled Order No. 9682



WERSI ROTOR WR 400

Rotating baffle, fabric-enclosed
2 motors with magnetic change over
Baffle opening for 12" speaker
Power: 220 V/50 Hz only
(German instructions only)

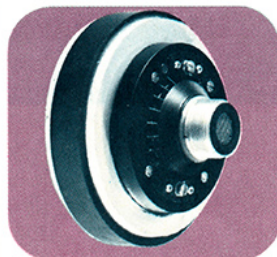
Assembled Order No. 9690



WERSI ROTOR WR 600

Rotating baffle, fabric-enclosed
2 motors with magnetic change over
Baffle opening for 15" speaker
Power: 220 V/50 Hz only
(German instructions only)

Assembled Order No. 9691



Threaded Compression Driver 100 Watts
for WR 1000

Assembled Order No. 9645

WERSI Unmounted Speakers

FANE Quality Speakers for every Purpose



WL 30 HT

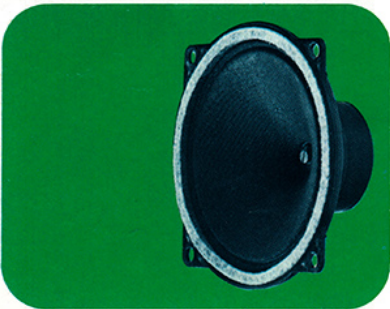


WL 50 HT



WL 50

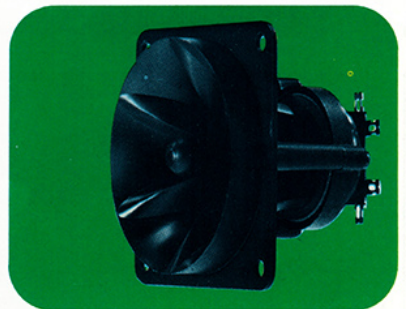
Model	Cont. Power	Purpose	Dome	Voice Coil	Frequency Response	Gauss	Maxwell	Order No.
High Power 12" Speakers								
WL 30	30 Watts	Organ, gen. purpose		2"	35- 7,000	10,000	100,000	9622
WL 30 HT	30 Watts	Organ, voice		2"	35-14,000	10,000	100,000	9623
WL 50	50 Watts	Organ, gen. purpose		2"	30- 7,000	14,000	186,000	9624
WL 50 HT	50 Watts	Organ, guitar		2"	30-14,000	14,000	186,000	9625



HT 1



HT 2



HT 3

Model	Cont. Power	Purpose	Dome	Voice Coil	Frequency Response	Gauss	Maxwell	Order No.
Tweeters								
HT 1	10 Watts	Voice, rhythm			2 k-25 k	8,000	6,000	9610
HT 2	50 Watts	Voice, rhythm			1 k-26 k	piezo-electric		9611
HT 3	50 Watts	Voice, rhythm			1 k-26 k	piezo-electric		9612

WERSI offers an assortment of unmounted speakers. They are top quality products, manufactured by FANE in Great Britain. The line includes high-efficiency speakers for organ use, the Crescendo series for the professional and specially tailored models for guitar and bass. Better compression horns and tweeters are listed too.



Crescendo 12



Crescendo 15



Crescendo 18

Model	Cont. Power	Purpose	Dome	Voice Coil	Frequency Response	Gauss	Maxwell	Order No.
FANE Crescendo 12"								
Crescendo 12 A	100 Watts	Guitar, organ	Yes	2"	30-10,000	20,000	266,000	9630
Crescendo 12 Bass	100 Watts	Bass		3"	30-4,000	20,000	388,000	9631
FANE Crescendo 15"								
Crescendo 15/100 A	100 Watts	Guitar, organ	Yes	2"	30-9,000	20,000	266,000	9632
Crescendo 15/125	100 Watts	Bass		3"	25-4,000	20,000	517,000	9633
FANE Crescendo 18"								
Crescendo 18	150 Watts	Gen. purpose	Yes	3"	20-4,500	20,000	517,000	9634



DK 30



DK 50



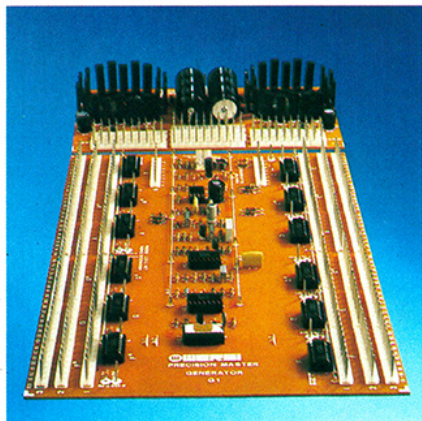
DKX 100

Model	Cont. Power	Purpose	Dome	Voice Coil	Frequency Response	Gauss	Maxwell	Order No.
Compression Horns								
DK 30	30 Watts	Voice, guitar, organ			1.5 k-10 k			9641
DK 50	40 Watts	Voice, guitar, organ			3.5 k-20 k			9642
DKX 100	100 Watts	Voice, PA			1 k-20 k			9643

WERSI Kits and Components

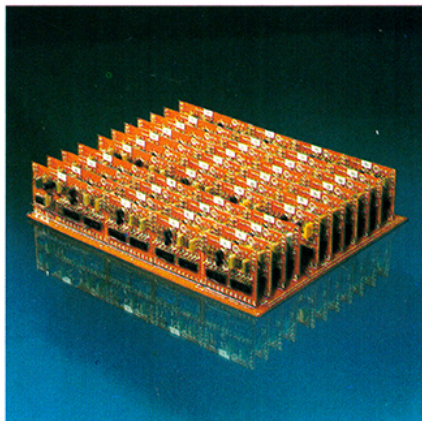
Should you desire to build an organ of your own design or add features to an instrument you can buy individual kits and components.

Here is a representative selection from our program. For prices see the price list or consult the factory.



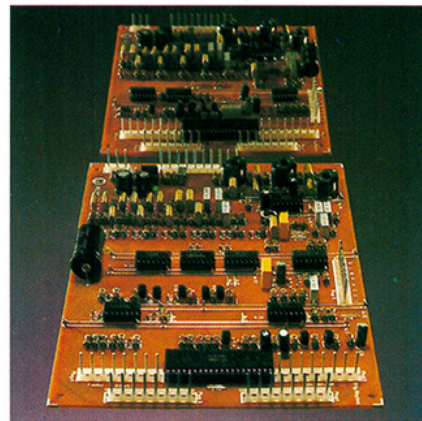
Power Supply, Generator

You can order individual kit units from WERSI's organ program like the power supply and tone generator shown here.



Electronic Keys

Besides the electronic keys we supply kits for envelope control and key contacts.



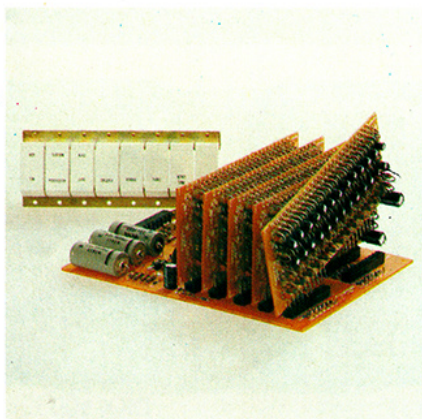
Pedal Electronics

Pedal electronics (keying, sustain, voicing) is available for 13 and 30 pedals.



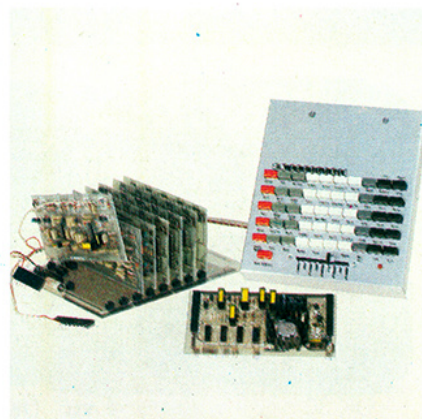
Reverb Amplifier

Reverb amplifier with large spring unit. Spring assembly available separately.



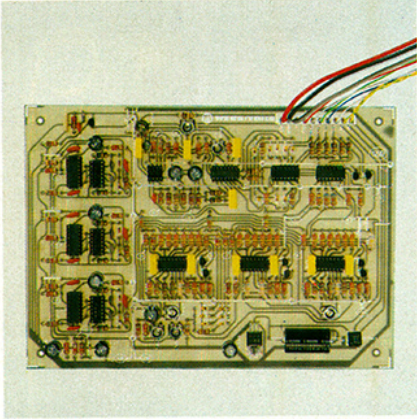
Piano

Piano electronics including switches and wiring harnesses from our free-standing piano.



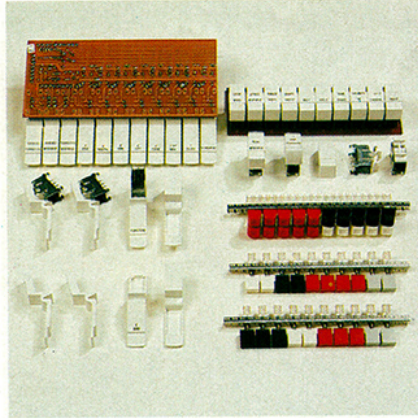
WERSIMATIC Rhythm

WERSIMATIC rhythm and auto accompaniment electronics for organs other than current WERSI models.



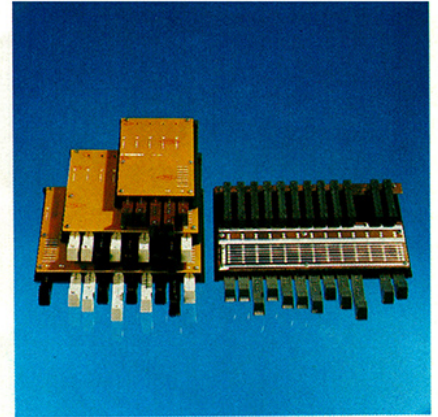
WERSIVOICE

Add the rotor sound/string choir to an organ of any make (electronics only).



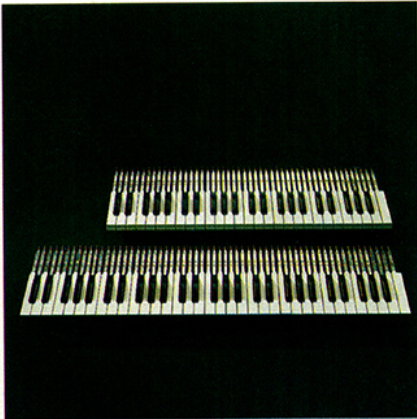
Switch Assemblies

Stop switches with rocker or tongue tabs or actuators. Push button assemblies with multiple contacts.



Drawbars

Linear-action switch and potentiometer assemblies, 5 to 13 drawbars per assembly.



Manuals

Fully assembled manuals, 4 or 5 octaves, with straight or slanted key fronts.



Pedals, Swellshoe

13 pedal clavier, built-in or free-standing. 25 or 30 pedal claviers for consoles, lacquered or with ebony sharps.

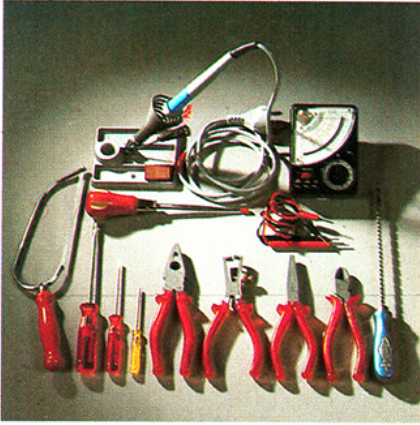


Organ Benches

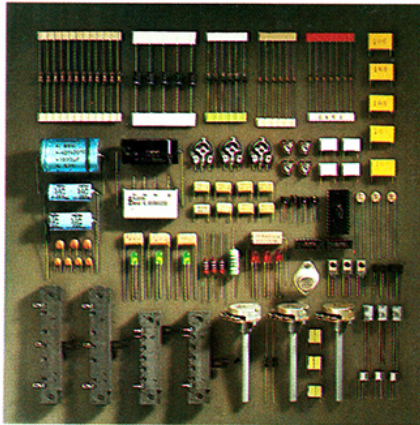
Wide assortment of organ benches for both spinet and console.

WERSI Electronic Components

All electronic components and parts which are used in our kit program are available individually.
For prices see price list.



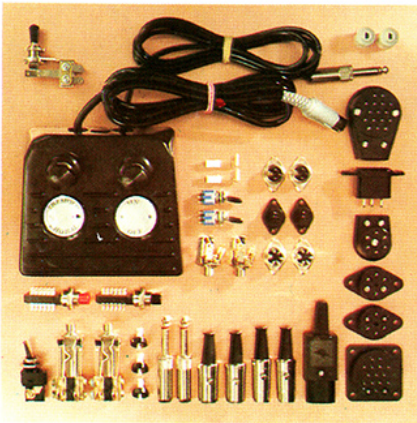
Tools and Equipment
Multimeters
Soldering irons
Hand tools



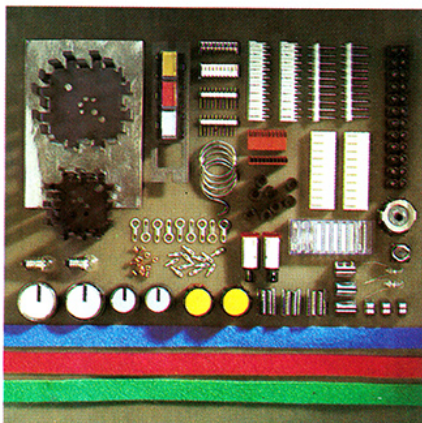
Electronic Components
Resistors
Capacitors
Transistors
IC's
Diodes
Potentiometers



Wires and Cables
Stranded wires,
several gauges
Shielded cables
Speaker wires
Line cords



Switches and Connectors
Audio connectors (DIN)
Phone plugs and jacks
Multi-pole connectors
Adapters
Line switches
Foot switches



Small Parts
Solder
Lugs, pins
Spacers
Terminal strips
Bulbs
Heatsinks
Adhesive foil



Accessories
Grille cloth
Damping wool
Chrome casters
Chrome corners
and much more



WERSI
Records



SOUNDEXPLOSION

Klaus Wunderlich in a true fireworks display of popular melodies.

Side 1: Mack The Knife – Rosen Aus Dem Süden – Piano Wersi Ragtime – Chattanooga Choo Choo – The Green Leaves of Summer – In A Little Spanish Town
Side 2: Caravan – Goin' Out Of My Head – Come With Me To The Chambre Separee – Tschaikowski Theme (from Concert in B flat minor) – Swinging Mozart (from Sonata in C major) – Slalom Beat

LP Order No. 804



Klaus Wunderlich demonstrates the WERSI organ. A good way to hear the sounds from WERSI's new generation of organs.

Liner notes available January 1977

LP Order No. 812
Cassette Order No. 9812



The Flight of the Bumble Bee

A collection of popular melodies.

Side 1: The Flight of the Bumble Bee – In Mir Klingt Ein Lied – Little Drummer Boy – Ghost Riders In The Sky – Red Roses For A Blue Lady – El Cumbanchero
Side 2: Kansas City – She – Air – Wolgalied – Petersburger Schlittenfahrt – Jingle Bells

LP Order No. 809



GOLGATHA

The Passion Story of Christ. A Rock Oratorium. German Lyrics. Conducted by Berry Lipman

LP Order No. 806



Franz Lambert at the new WERSI organ HELIOS W 2 S with popular evergreens.

Side 1: Keep On Smiling – Claire – If You Could Read My Mind – Walking In The Black Forest – Love Story – The House Of The Rising Sun
Side 2: Beach Party In Santa Cruz – La Vie en Rose – Girlwatcher's Theme – Speak Softly Love – Strangers In The Night – Green Sleeves

LP Order No. 814
Cassette Order No. 9814



A Christmas Night

Franz Lambert interprets seasonal standards with new variations.

Side 1: White Christmas – Winter Wonderland – Aba Heidschi Bumbeidschi – Petersburger Schlittenfahrt – Süßer die Glocken nie klingen – Abendseggen
Side 2: Jingle Bells – Little Drummer Boy – Air from Suite in D major – Leise rieselt der Schnee – Ave Maria – Silent Night

LP Order No. 807
Cassette Order No. 9807



Old organ masterpieces, interpreted on the new WERSI organ CLASSICA.

Available 1977

LP Order No. 813
Cassette Order No. 9813

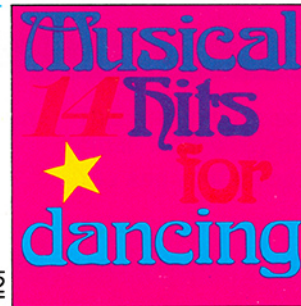


FASCINATION

Klaus Wunderlich at the WERSI organ. Popular evergreens in a modern sound.

Side 1: American Patrol – Love Story – Bubble Gum – At the Blue Danube – Exodus – Raindrops Keep Falling On My Head
Side 2: Tico-Tico – Solweig's Song – In Der Halle Des Bergkönigs – Sentimental Journey – Ole Guapa – Smoke Gets In Your Eyes

LP Order No. 802

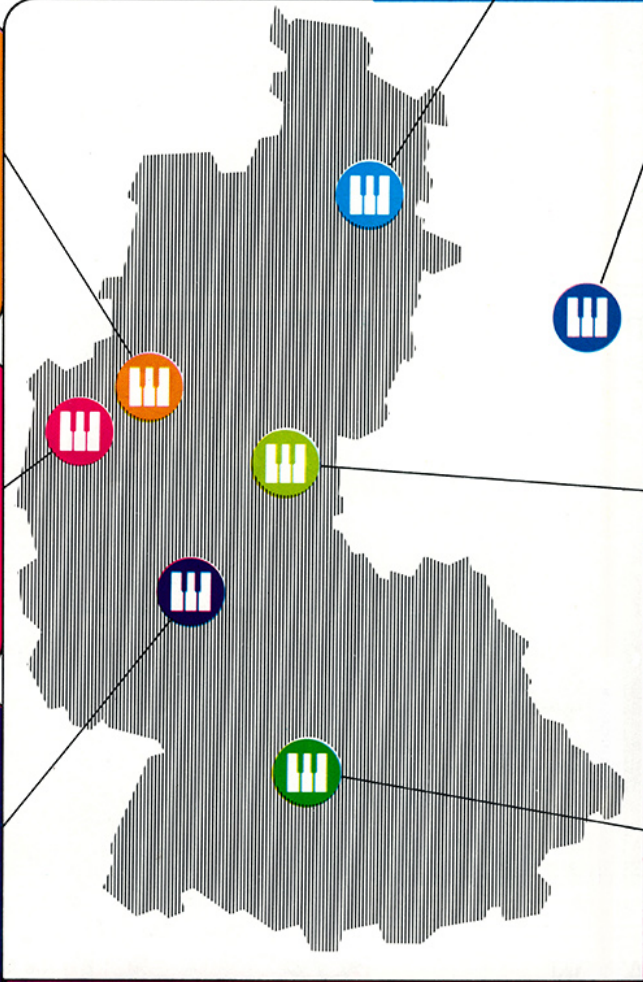


The famous Belgium organist Albert de Cock plays at the WERSI organ for dancing.

Side 1: Cabaret – I Love Paris – Could Have Danced – Tea For Two – Do Re Mi – If I Were A Rich Man – On The Street Where You Live
Side 2: Hernando's Hidaway – If I Loved You – Edelweiß – Bali Hai – What A Beautiful Morning – Out Of My Dreams – They Say That Falling In Love Is Wonderful – People Will Say We Are In Love

LP Order No. 815
Cassette Order No. 9815

Should you happen to travel through Germany one of these days you are cordially invited to visit one of WERSI's showrooms the addresses of which are listed here.



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WERSI
Zweigniederlassung
Lüttkamp 23-25

2000 Hamburg 53
Telefon 040/837722

Gelsenkirchen
WERSI
Zweigniederlassung
Ückendorferplatz 208

4650 Gelsenkirchen-
Ückendorf
Telefon 0209/141391

Berlin
WERSI
Berlin GmbH
Heerstraße/
Ecke Frankenallee

1000 Berlin 19
Telefon 030/3018092

Neuß
WERSI
Zweigniederlassung
Görlitzer Str. 1
(Rhein-Center)

4040 Neuß
Telefon 02101/12709

Kassel
WERSI
Zweigniederlassung
Rudolf-Schwander Str.15

3500 Kassel
Telefon 0561/17760

Halsenbach
WERSI electronic
GmbH & Co KG
Industriestraße

5401 Halsenbach
Telefon 06747/273-275

Stuttgart
WERSI
Zweigniederlassung
Dürnauer Weg 5

7000 Stuttgart
Telefon 0711/452847

WERSI Headquarters Halsenbach

How to get there:

Take the autobahn no. 61 from any direction, exit at Emmelshausen and head towards Koblenz for approximately one mile. WERSI headquarters are located in the Halsenbach industrial park.

Attraction:

WERSI is centered in the picturesque wine-growing areas where the Mosel river meets the Rhine. You will find a medieval castle every few miles and it is only about six miles to the famous Lorelei rock on the Rhine river.



 **WERSI** electronic GmbH & Co KG

Industriestraße
5401 Halsenbach

Hours

Mo – Fr	9.00 – 12.30 u. 13.30 – 17.30
Sa	9.00 – 14.00

Telefon **06747/273-275**
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Unser Werk in Halsenbach bietet Ihnen einen 24 Std.-Telefon-Service. Ein Anrufbeantworter nimmt alle Ihre Wünsche auf Band. Nutzen Sie diese Möglichkeit.

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Für technische Informationen und Rückfragen haben wir einen besonderen Telefonanschluß für Sie eingerichtet.
Tel.: 06747/6773.



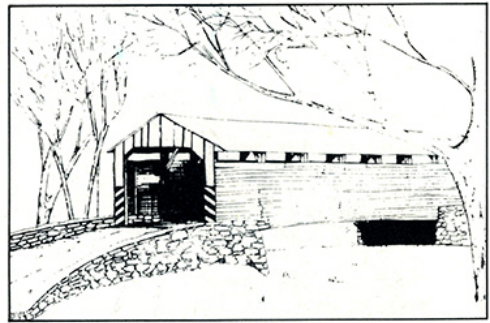
WERSI headquarters are situated about midway between Frankfurt and Bonn (approximately 15 miles southwest of Koblenz).

If your travelling itinerary leads you into the vicinity of Halsenbach you should stop there. Qualified personnel will answer all questions you may have when you see the large display of WERSI's product line.

This is also the place where all of the great innovations in organ technology are being developed.

You and your friends are cordially invited to pay us a visit.

WERSI-electronics...



...in the heart of historie Pennsylvania



This is the home of WERSI electronics, Inc., containing a large factory showroom and sound studio, together with kit inventories and customer support engineering.

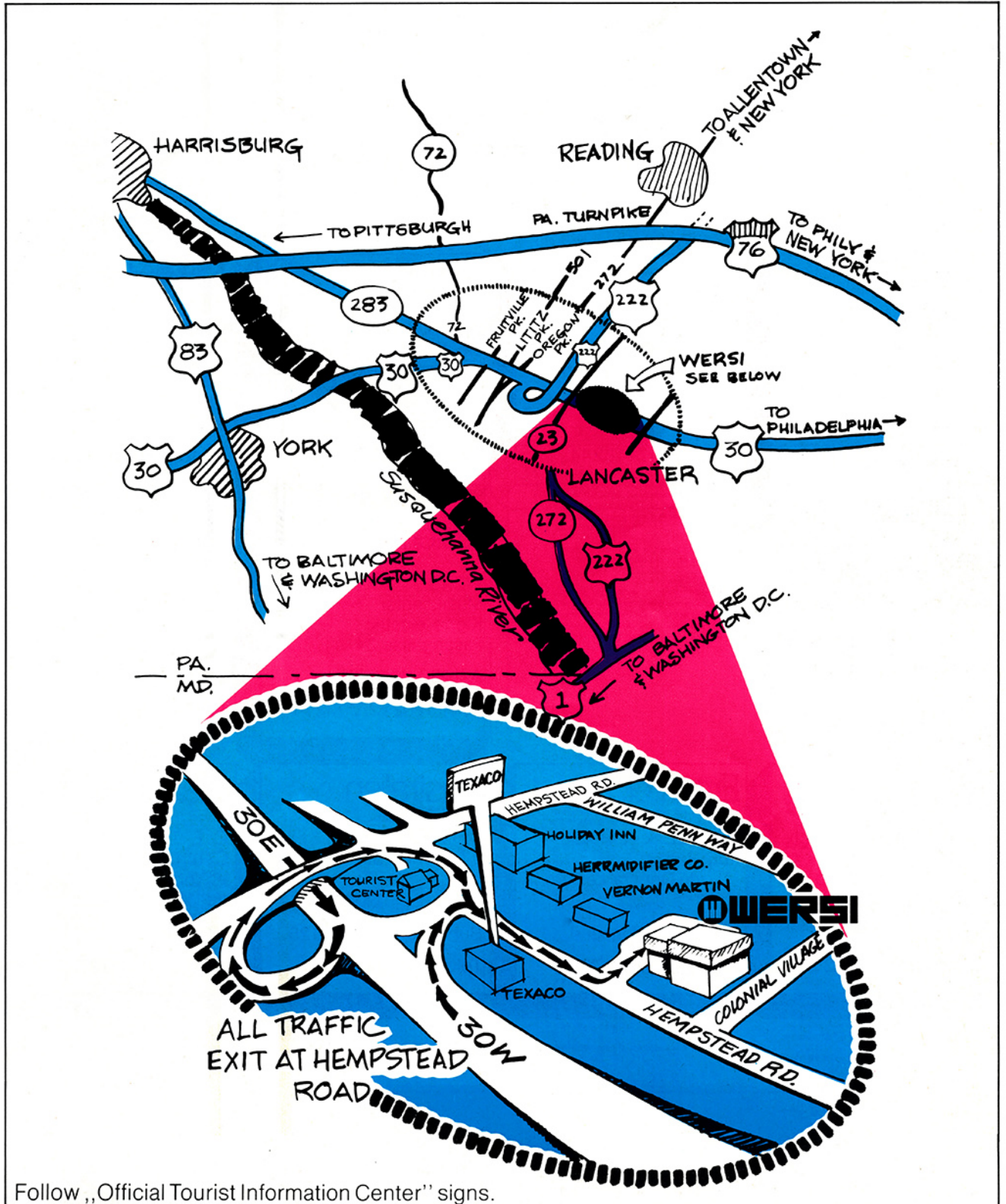
WERSI electronics, Inc., Lancaster, Pennsylvania is easily accessible from every point of the major metropolitan areas along the East Coast (see map).



WERSI electronics, Inc.

P.O.Box 5318
 1720 Hempstead Road
 Lancaster, Pennsylvania 17601
 Phone: (717) 299-4327

Office Hours:
 Tue thru Sat: 9 to 5
 Monday and evenings by appointment



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Kauenstraße

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Telefon 085/25050

Schweiz

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Zweigniederlassung
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CH-8037 Zürich
Telefon 01/448244

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Telefon 0222/733274

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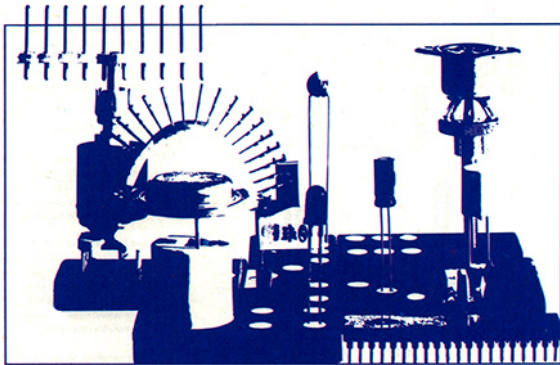
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9 Florence Street

Burwood/Victoria 3125
Telefon 2883034

Madagaskar

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et Technique
de l'Artisanat

Tananarive
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ASSEMBLY MANUAL AM 460

WERSIVOICE
ROTOR/STRING

The following pages contain excerpts from WERSI assembly manuals. Note the step-by-step instructions and the detailed illustrations.

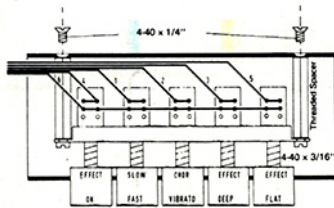


Figure 12: Assembly of the Remote Control Box

- () Grounding: Connect the WERSIVOICE circuit board (terminal "GND") to the system ground of the organ, using stranded hookup wire 16 or 18 gauge.

Connect the power transformer frame (solder lug) to the system ground.

- () Wire the four control switches "Slow/Fast", "Choir/Vibrato", "Deep", and "Flat", referring to Figs. 9 or 10, using the six-conductor cable (item # 54). Check Fig. 14 for details of the switch wiring. Select an arbitrary color sequence and label the corresponding wires in Figs. 9 or 10 and 14. Connect one of the wires between the "GND" pin and the switch frame.

Terminate the wires leading to the circuit board with connector inserts, referring to Fig. 13 and insert them into the connector housing. The terminal "GND" will receive additional wires. Fit this particular insert with a piece of bare wire such that the other wires can be fastened to it.

If you are using the remote control box slip the cable through the hole in the cover after having fitted the hole with a rubber grommet (item # 52-6).

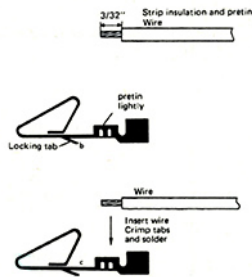


Figure 13: Installation of Connector Inserts

Step 16: Power transformer

- () Locate the power transformer (item # 49). Note the two screws which hold the stack together. If necessary, re-install them such that the screw head is near the solder pins.
- () Install the transformer at the location "Transformer" by soldering its five pins to the circuit board.

This completes the assembly of the circuit board. Once again, check the components for proper type, value and polarity and check the foil side for correct soldering and for unwanted solder bridges. If in doubt, refer to Fig. 15. Set the board aside temporarily.

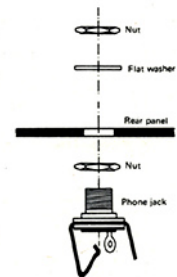


Figure 18: Installation of a Phone Jack

Chassis Preparation

Step 17: Front panel

- () Install the AC toggle switch (from bag # 52) at the leftmost hole in the chassis front. Orient it such that the labelled side of the switch points towards the center of the chassis. This way the switch is "ON" with the handle pointing upwards.
- () Push the pilot light (item # 52-2) into the hole next to the switch.
- () Fasten the bezel (item # 51), using sheet metal screws # 4 x 1/4" (item # 52-3).

- () Install a 1 MOhm control at the third hole. Adjust the nuts (one inside, one outside) such that the protrusion of the shaft is minimal.
- () Similarly, install a 1 MOhm control at the fifth hole.

Step 18: Rear panel

Looking at the panel from the rear, the following items are to be installed from left to right (bag # 53):

- () Install a phone jack at the leftmost hole, referring to Fig. 18. Adjust the nuts such that the exterior protrusion of the jack is minimal.
- () Similarly, install a phone jack at the second and fourth holes.

- () Install the 6-pole audio receptacle, using 2-56 screws and nuts. The notch should face downwards.

Attention: If you are going to use the foot-operated remote control (optimal) replace the 6-pole receptacle with a 3-pole type (packed with the foot switches).

- () Install the fuse holder at the second hole from the right. The soft washer should be on the outside of the chassis. Insert a 2/10 A fuse for 110 VAC line voltage, a 1/10 A fuse for 220 VAC.
- () Install the rubber grommet at the last hole.

Step 6: Transistors

- Check "General Instructions", chapter "Transistors"
- Install the small signal transistors from bag # 33 thru 35.
- Install transistor Q 5 (bag # 36) by first pushing the T0 5 radiator on its case. This transistor may sit flush on the board. Make sure that the emitter tap corresponds with the marking on the board. The radiator remains on the transistor after mounting and may not touch any of the neighboring components. See Fig. 9.

Figure 9: Installation of transistor Q 5 with radiator

Figure 10: Installation of the transistors Q 10 and Q 12

- Install the transistors Q 10, Q 12 from bag # 38 as shown in Fig. 10. The metal side of the transistors must face the radiators, the labelling will thus be visible after the installation. Spread the leads of the transistors slightly and bend them at the proper distance from the body, corresponding to the mounting holes. **SOLDER THE LEADS AFTER TIGHTENING OF THE SCREW ONLY.** None of the leads may touch the radiators and the radiators may not touch each other.
- Install the transistor Q 8 from bag # 38 without radiator directly on the board using hardware in the following order: Screw 6 32 x 3/8" - transistor Q 8 - PC board - # 6 lockwasher - # 6 flat washer - 6 32 nut. Do not use the longer (5/8") screws. Fasten the screws tightly, since the collector (case) is connected to the circuit via the mounting screws. **SOLDER BASE AND EMITTER PINS AFTER TIGHTENING THE SCREWS.**

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- Install the output transistors Q 9, Q 11, Q 13, Q 14 as shown in Fig. 11. First, assemble each transistor with a small and a large radiator using 6 32 x 5/8" screws and # 6 nuts. Install this assembly on the board using # 6 lockwashers, flat washers and nuts. **SOLDER BASE AND EMITTER LEADS AFTER TIGHTENING OF THE NUTS.**

Figure 11: Installation of the transistors Q 9, Q 11, and Q 13, Q 14

Step 7: Trimtops

- Install the two trimtops from bag # 41 at the locations "Zero adjust" and "Quiescent current". The wiper may face in either direction. Turn the wiper to their mid position after soldering. (Depending on the trimtop type one of the center holes will remain unused.)

Step 8: Solder pins

- Install the 10 solder pins (from bag # 43) at the locations L 1, L 2, Tr 3, Tr 2, Tr 1, B +, A, B -, E, and G. Turn the flat side parallel to the board edge. Make absolutely sure that the shoulders of the pins sit all the way against the board, otherwise the board may be damaged later when the connectors are pushed onto the pins.

Step 9: Final inspection

- The assembly of the PC board is now complete. Verify at this point once more all components for correct value, type, and polarity. On the copper side, check for proper soldering and for solder bridges. When in doubt consult Fig. 7.

We remind you at this point again that we exclusively use top quality components from leading manufacturers. Do not replace any component with a second grade version since some of the elements work under conditions where only our factory-tested types provide sufficient safety margin for reliable operation.

The supplied solder is a 60 % tin - 40 % lead alloy with rosin flux core. Use only this or an equivalent type solder. **NEVER USE ANY SOLDER OR FLUXES CONTAINING ACID.** Acids will destroy a PC board with certainty since conductors will be corroded or unwanted current paths will develop between conductors. We refuse to repair PC boards on which acids were used, since future operation will definitely be impaired.

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Step 10: Rear panel assembly

- Install the components from bag # 44 onto the rear panel referring to the panel and to Fig. 15.
- Install the 4 black insulating cups from the outside at the locations "Left Channel" and "Right Channel" respectively using 4 40 x 3/8" flat head screws and 4 40 nuts.
- Install the 4 phone jacks from the inside into the cups using flat washers and nuts on the outside. Orient the solder lugs as shown in Fig. 15.
- Install the fuse holder at the location "Fuse" from the outside. The soft washer must fit on the out side of the chassis.
- Invert an 8 Amp. fuse into the fuse holder.
- Install the AC panel plug at the location "Power" using 4 40 x 3/8" flat head screws and 4 40 nuts.

Add a # 4 solder lug and a flat washer under the nut nearest to the fuse holder. Scrape off the paint on the chassis under the solder lug.

- Install the AC toggle switch at the location "Power On". Orient it such that the switch is closed with the handle pointing upwards. If needed use an ohmmeter to check the switch closure. Do not tighten the nut yet.

5 Chassis Assembly

Step 11

- Solder the 10 pole angle receptacle onto the PC board "LE". The receptacle openings must point towards the rear edge of the board. Refer to Fig. 12.

Figure 12: Assembly and installation of the PC board LE

22

Step 12

- Locate the small wiring harness and strip all ends (at the end with 4 wires) 1/8" and tin the leads. For the treatment of shielded cable see "General Instructions", chapter "Cable and Wires". Solder the wiring harness to the copper pads of PC board LE as shown in Fig. 12 b. Set the assembly aside.

Step 13

- Install the two amplifier PC boards onto the chassis floor, referring to Figs. 13 and 15.

Figure 13: Mounting of the amplifier PC boards onto the chassis

Step 14

- Locate the small PC board LE again and install 6 snap-on terminals (female) according to Fig. 14. The shielded cables have two terminals installed. It is therefore necessary to remove approx. 1/4" of the outer insulation. Slip an insulating sleeve over each lead before crimping and soldering the terminal.

Figure 14: Snap on terminal and associated snap on pin.

Step 15

- Install the PC board LE onto the diagonal bracket on the chassis, referring to Figs. 12 a and 15. The receptacle openings must face upwards.

23

On pages 102 through 103 we have reproduced excerpts from some of our assembly manuals. Note the step-by-step assembly instructions and the detailed sketches.

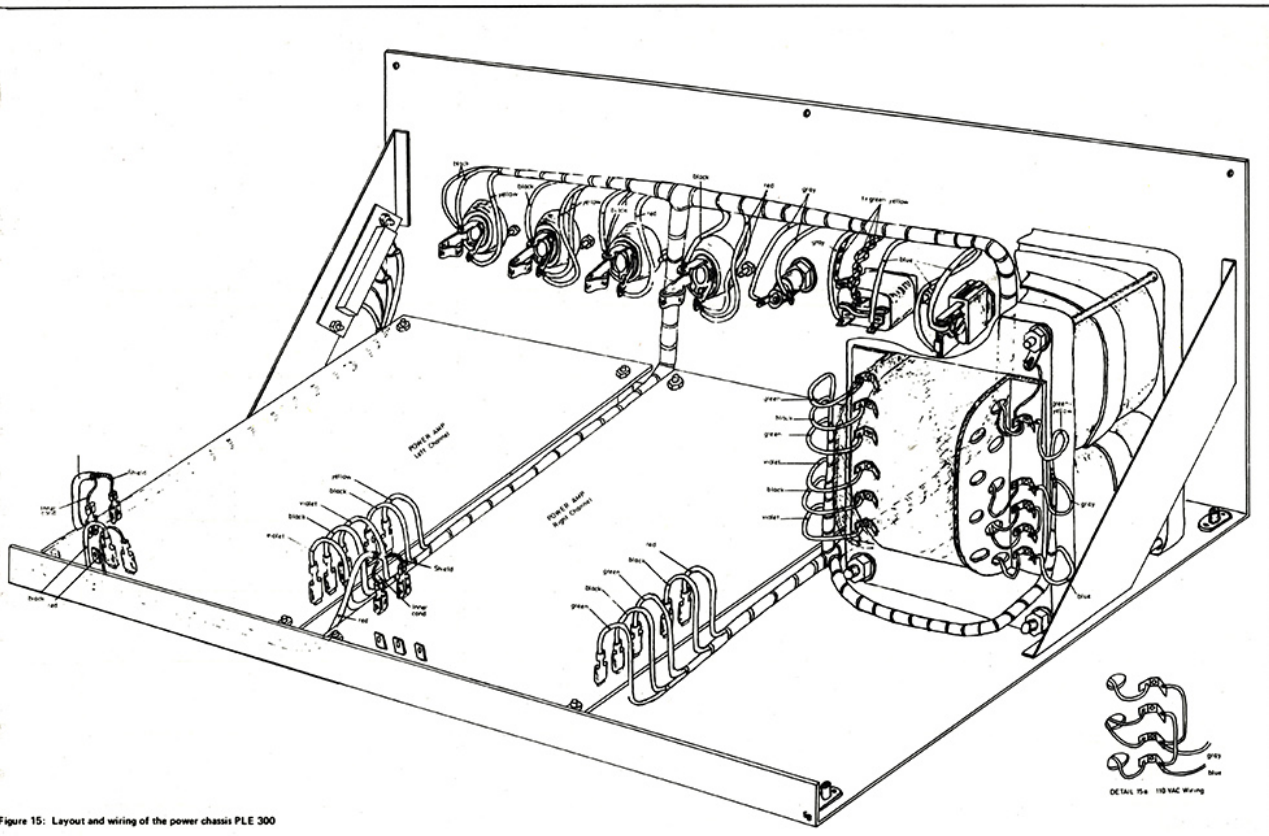


Figure 15: Layout and wiring of the power chassis PLE 300

24

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Step 16

1) Dress the wiring harness as shown in Fig. 15 and push the snap-on terminals onto the pins on the PC boards. If you find that the connectors are very hard to push on, carefully pry open the connectors with a small screwdriver. The inner conductors of the shielded cables are connected to pins "E", the shields to pins "G".

Step 17

1) Mount the power transformer onto the chassis floor using 4 screws M 6 x 10 mm (metric). Refer to Fig. 16 for the orientation.

Step 18

1) Strip all ends of the large wiring harness 1/8" twist the strands together and tin the ends.

Step 19

1) Dress the large wiring harness into the chassis as shown in Fig. 15 and solder first all leads along the rear panel. Tighten nut on toggle switch now.

Step 20

1) Solder all leads to the power transformer. Use Fig. 15 for 220 VAC wiring, use Detail 15 a for 110 VAC wiring. Make sure you use the correct jumpers. The so called "static shield" wires coming from the transformer winding may go directly to the solder lug on the frame. In that case solder the green-yellow wire to that solder lug.

Step 21

1) Slip insulating sleeves over the wires leading to the PC boards and crimp and solder snap-on terminals onto the ends. Push the terminals onto the pins, easing the insertion, if necessary, by slightly expanding the terminals with a small screwdriver.

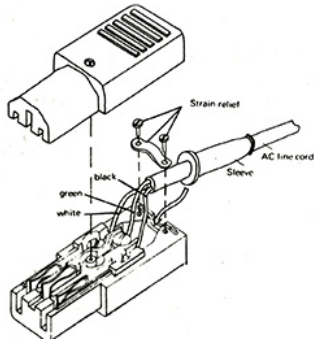


Figure 16: AC line cord wiring

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6. Initial Operation

Check the power chassis now for proper operation since all subsequent building blocks can function correctly only if the power chassis does.

All measurements listed below were taken with a multimeter with an impedance of 20,000 Ohms per Volt. The checklist refers to one amplifier only. We recommend that you check both channels simultaneously at each step.

- 1) Put the toggle switch "Power" to the downward position (off). Do not connect any speakers yet.
- 1) Temporarily place a jumper across the amplifier inputs (pins E and G).
- 1) Select a range of approx. 50 VDC on the meter and connect it to pins "B" (+) and "A" (-).
- 1) Plug the line cord into the panel plug at the rear of the chassis and connect it to a suitable AC outlet. Observing the voltmeter, turn on the AC power for a second or so and then off again. Depending on the actual line voltage the voltmeter should have indicated 35 to 40 VDC (while AC power was on).
- 1) Connect the voltmeter between pins "A" (+) and "B" (-) and repeat the AC on/off step. Again, the voltmeter should indicate 35 to 40 VDC.
- 1) Connect the voltmeter (50 VDC range) between pins "L 1" (+) and "L 2" (-). Observing the voltmeter, turn on the AC power for a second or so. The indication should fall (after a possible initial jump) immediately below 5 VDC. If the indication appears to be negativ (pegging of the pointer below "0"), reverse the leads and repeat the step.
- 1) **IMPORTANT:** Repeat the preceding step for the other channel **NOW**.
- 1) If both checks are successful proceed with the testing. Otherwise, do not operate the system any

longer, disconnect the line cord, and carefully check the PC board(s) for proper component types, values, polarities and for correct soldering.

- 1) Select a more sensitive DC voltage range on the meter (with the AC power on) until a clear reading is obtained.
- 1) Adjust this indication to zero by carefully turning trimpot P 1 ("Zero Adjust"). Do not touch any other components either with your hands or tools. When the voltage is adjusted to zero, the push/pull output amplifier operates symmetrically. Turn off the AC power. Remove the voltmeter.
- 1) Connect the voltmeter between testpoints 9 (+) and 8 (-), see Fig. 7 for locations. Select a range of approx. 100 mVDC. Turn on the AC power. Adjust the indication to approx. 20 mVDC by turning trimpot P 2 ("Quiescent current"). The quiescent current of the output amplifier is thus adjusted to approx. 2 x 40 mA. If a suitable test instrument is not available it is sufficient to leave both trim pots (P 1 and P 2) at their mid position. Turn off the AC power.
- 1) Connect your speakers. Turn on the AC power. You should hear just a faint hum and hiss from the speakers (output voltage approx. 1 mVRMS). Turn off the AC power.
- 1) Remove the jumper between pins "E" and "G". Turn on the AC power. If you touch the pin "E" with your finger the noise from the speaker should become more pronounced.
- 1) If the preceding steps were successful, especially the adjustability of the "Zero Adjust" is important, it can be safely assumed that the amplifier is fully operational. We recommend that you SKIP the following tests. It is our experience that more amplifiers are "tested to death" than die in actual operation.

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